HOW TO RANK AND VALUE FANTASY BASEBALL PLAYERS FOR POINTS LEAGUES

A STEP-BY-STEP GUIDE USING MICROSOFT EXCEL

TANNER BELL

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FROM THE AUTHOR

Welcome to How to Rank and Value Fantasy Baseball Players for Points Leagues.

I'm probably very much like you. I consider myself an above average fantasy baseball player. I play in a handful of leagues, each one a little different with its own twists and intricacies.

And that's what has always made me uncomfortable with following and reading the mainstream fantasy advice that is readily available. Even if we assume that I can wade through and separate the good fantasy analysts from the bad, there's no way even the best analyst's rankings will take my league intricacies into account.

The only way to get an edge on your league is to create your own rankings.

I believe that if you truly want to be a great fantasy baseball player you need to calculate your own rankings and dollar values that are tailored for your specific league. "If you want something done right, do it yourself".

These instructions are intended to teach you a method you can use to create your own rankings. I'm not here to tell you if Bryce Harper is going to hit 15 HR next year or 35. But I will tell you how those HRs should be valued in your league.

If you have any suggestions for improvements to this book, please e-mail me at SmartFantasyBaseball@gmail.com or use the comment message boards that correspond to each chapter in the book.

Thank you for your purchase and for supporting SFBB.

~ Tanner Bell

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OBJECTIVES

When you complete this guide, you will have an Excel file that will allow you to:

- View projections for any fantasy-relevant player
- View a complete ranked list of all players at any position
- View the dollar value of each player, based upon your specific league settings
- View an inflation-adjusted dollar value for each player based upon keepers and/or actual in-draft results
- Update projections for any player and immediately see a revised ranking and dollar value for the player

OVERVIEW

These instructions demonstrate the process of creating rankings and dollar values for a 12-team points league with the following scoring format:

Hitter Points		Pitcher Points	
AB	-1	**IP**	6
H	5	**K**	2
BB	3	**BB**	-2
2B	3	**HA**	-3
3B	5	**SV**	5
HR	9	**HD**	4
SB	3	**HRA**	-12

I know what you're thinking. "That's a really weird scoring format, there's no way this book is for me".

Well, I chose this on purpose. To me, points leagues are like fingerprints and snowflakes. Each one is a little different than all the others. So for me to pick a "standard" points league to illustrate this process seems like a fool's errand.

My intent for this book is to help you develop the skills and methodologies necessary to create customized rankings and dollar values for ANY kind of points league.

Your league's scoring format is surely different than the example I will use in this book. I will lay out example formulas for the settings above, you'll just need to tweak the formulas slightly to tailor things for your league's settings. In the end, you will have rankings and dollar values tailored specifically to you league.

WHY I WROTE THIS BOOK

I've spent hours, maybe days, of my life scouring the web looking for guidance on how to calculate my own rankings. It seems like nobody takes the time to explain exactly how to do these things. If you look hard enough you might find an article that gives a quick bullet point list. Maybe something like:

- Download projections
- Multiply projections by your point system
- Adjust for replacement level
- You're done!

This book is pushing 25,000 words. So they're leaving some details out!

My goal is for this to be the most comprehensive guide on creating customized points league rankings you can find ANYWHERE.

MICROSOFT EXCEL

These instructions have been written for Microsoft Excel for Microsoft Windows. I used Excel 2013 while creating this guide and taking screenshots, but you should have no issue if you're using Excel 2010 or Excel 2007 for Windows.

Unless you're a highly skilled spreadsheet user, this guide is likely not for you if you have Excel for Mac or are using a different spreadsheet program. Unfortunately Microsoft creates very different versions of Excel for Mac and Excel for Windows.

DOWNLOAD EXAMPLE EXCEL FILES

Visit this page at SmartFantasyBaseball.com to download the example Excel files that accompany this book. The files for each part represent what your spreadsheet should look like at the end of that given chapter. For example, if you're having difficulty on "Part 7", you can download the completed Excel file for that section and see the formulas as they are intended to be used in an actual file.

THE HISTORY OF THIS BOOK

This book began as a series of free blog posts originally written and posted at SmartFantasyBaseball.com. The six part "How to Calculate Custom Rankings for a Points League" series corresponds to Parts 1 through 6 of this book. This book picks up on the great void in the free portion of the series – how to convert projected points for players into dollar values.

There are links to the original series throughout this book because I want to have an avenue for people to ask questions and have some discussion about the series. If you find yourself stuck on a particular part of the instructions, visit the comments section for that particular part. See if others have experienced the same issue or ask a question in the comment area.

The projections used in this book are the Steamer 2015 preseason projections from Fangraphs. If you see projections that you disagree with or that appear unusual, it's likely because I began writing this book in December 2014, still early in the off-season.

IF YOU HAVE QUESTIONS

Please post your questions or comments about the process in the comment section for the most applicable part in the book. You can use the links below to jump right to the comment areas for each part:

- Part 1 – Download Projection Data and Player ID Map
- Part 2 – Set Up League Scoring Settings
- Part 3 – VLOOKUP, Excel Tables, and Structured References
- Part 4 – Pitcher Rankings
- Part 5 – Calculating Projected Points
- Part 6 – Replacement Level and Position Scarcity
- Part 7 – Dollar Value Calculation Settings
- Part 8 – Converting Points into Dollar Values
- Part 9 – Incorporating In-Draft and Keeper League Inflation

The comment areas for Parts 7 through Part 9 are not readily available on the web (they won't show up in Google and you can't get to them navigating around the website). The only way to get to those comment areas is to use the links within this book. They are just for readers of this book.

PART 1 – DOWNLOAD PROJECTION DATA AND PLAYER ID MAP

INTRODUCTION

In this first part of the book we'll download hitter and pitcher projections, take a look at and download player ID information, and bring all of this information into one Excel file.

WHERE TO GET PROJECTIONS

There are many solid projection systems available for download. Some very fine projections are available at membership sites like Baseball Prospectus or Baseball HQ.

But if you're like me, when I started out on the adventure of calculating my own rankings, I wasn't looking to pay for something I wasn't sure I'd be able to translate into fantasy success. It's great to have accurate projections, but how do you use them if you can't take the next step to rank and value those projections?

For that reason, I'm partial to the Steamer projections.

They're available in easy-to-use Excel downloads (specifically CSV) at Fangraphs. There are also daily rest-of-season updates, meaning on any day you can see the projections for the remainder of the season for any player. Steamer also does a good job of projecting playing time (if a player gets hurt, they try to estimate the effect on playing time).

And they're free.

USE WHATEVER PROJECTION SYSTEM YOU PREFER

I'll be using Steamer in this example. But you can use the system of your choice. Just try to pick a system that uses some form of player ID system.

If you're looking for your next adventure after this book, you can try creating your own projections.

WHAT IS A PLAYER ID?

Just like you and I are identified by Social Security Numbers or employee IDs (at work), most of your major fantasy or MLB websites use a form of ID number that is unique to each player.

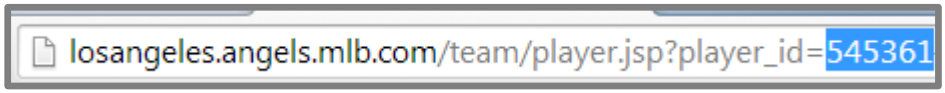
Using an ID is a more reliable way of identifying a player than a simple name. Two players can have the exact same name (think Chris Youngs and Alex Gonzalezes) which could cause confusion when ranking players.

And players can go by different name variations (Mike and Michael, Jon and Jonathan, JP and J.P., AJ and A.J.) or even change their name (Mike to Giancarlo Stanton, Fausto Carmona to Roberto Hernandez).

Here's a quick look at some player IDs for various systems:

Player ID Source	Mike Trout	Clayton Kershaw	Giancarlo Stanton
Baseball Reference	troutmi01	kershcl01	stantmi03
Fangraphs	10155	2036	4949
MLB	545361	477132	519317
CBS	1739608	1221725	1630093
ESPN	30836	28963	30583

If you're wondering how to determine someone's player ID, the trick I use is to visit their player page on a particular website. You can usually find the player ID in that web page's URL. For example, here's Mike Trout's MLB.com player page and his player ID is highlighted in the image:



In looking at that table above, you can see here that there is not one universal numbering system.

To alleviate this problem of tracking hundreds of IDs and various systems, I maintain a "Player ID Map" (click here to download in Excel). The Player ID Map lists out all "fantasy-relevant" players and their ID for each of the major systems (Fangraphs, Baseball Reference, Baseball Prospectus, Yahoo, ESPN, etc.).

	A	B	C	F	G	H	I	J	L	O	P	Q	S	W	X
1	IDPLAY	PLAYERNAME	BIRTHDAT	TEA	LG	POS	IDFAN	MLBID	CBSID	RETROID	BREFID	NFBCID	ESPNID	BPID	YAHOOID
1142	troutmi01	Mike Trout	8/7/1991	LAA	AL	OF	10155	545361	1739608	troum001	troutmi01	8861	30836	59432	8861
1143	trumbma(	Mark Trumbo	1/16/1986	ARI	NL	3B	6876	444432	1104384	trumm001	trumbma01	8824	29322	46716	8824
1144	tulowtr01	Troy Tulowitzki	10/10/1984	COL	NL	SS	3531	453064	589256	tulot001	tulowtr01	7850	28567	46724	7850
1145	turneja01	Jacob Turner	5/21/1991	MIA	NL	P	10185	545363	1699971	turnj002	turneja01	8855	30526	66008	8855
1146	turneju01	Justin Turner	11/23/1984	NYM	NL	2B	5235	457759	1600680	turnj001	turneju01	8588	29607	51991	8588
1147	ueharko0	Koji Uehara	4/3/1975	BOS	AL	P	9227	493157	1657590	uehak001	ueharko01	8394	30130	44014	8394
1148	uggladaO:	Dan Uggla	3/11/1980	ATL	NL	2B	3442	462564	292238	uggld001	ugglada01	7692	6462	44018	7692
1149	uptonbj0:	B.J. Upton	8/21/1984	ATL	NL	OF	5015	425834	390784	uptob001	uptonbj01	7333	5970	45374	7333
1150	uptonju0:	Justin Upton	8/25/1987	ATL	NL	OF	5222	457708	593198	uptoj001	uptonju01	8080	28841	51985	8080
1151	uribeju01	Juan Uribe	7/22/1979	LAD	NL	3B	454	346874	212040	uribj002	uribeju01	6698	4657	858	6698
1152	utleych01	Chase Utley	12/17/1978	PHI	NL	2B	1679	400284	288923	utlec001	utleych01	7072	5383	16632	7072

I stumbled across the concept of the player map at Tim Blaker's website Crunchtimebaseball.com and I then tailored it to meet my needs. Tim maintains his own version and updates his more frequently than I do. I only maintain my own because I've wanted to add some new columns.

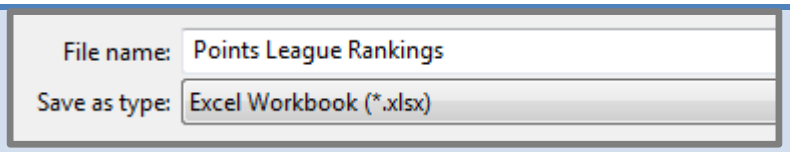
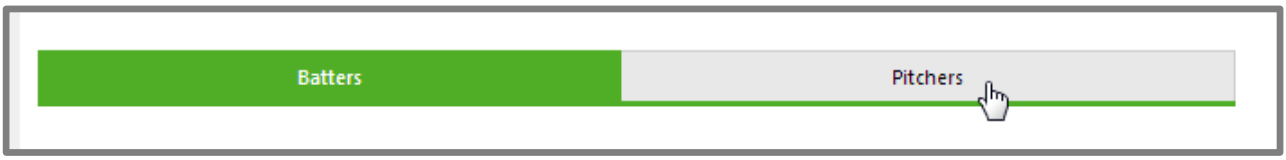
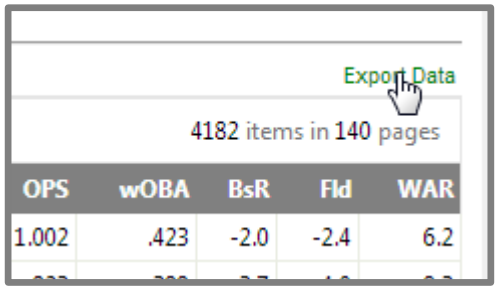
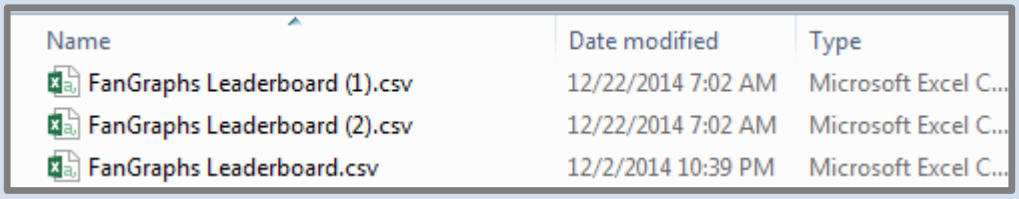
On this site I will typically work with the Baseball Reference ID as my main system. I like those IDs more than the others because I can look at an ID and usually determine who the player is (troutmi01 is Mike Trout). Most other sites use a straight ID number that has no inherent meaning (10155 or 545361).

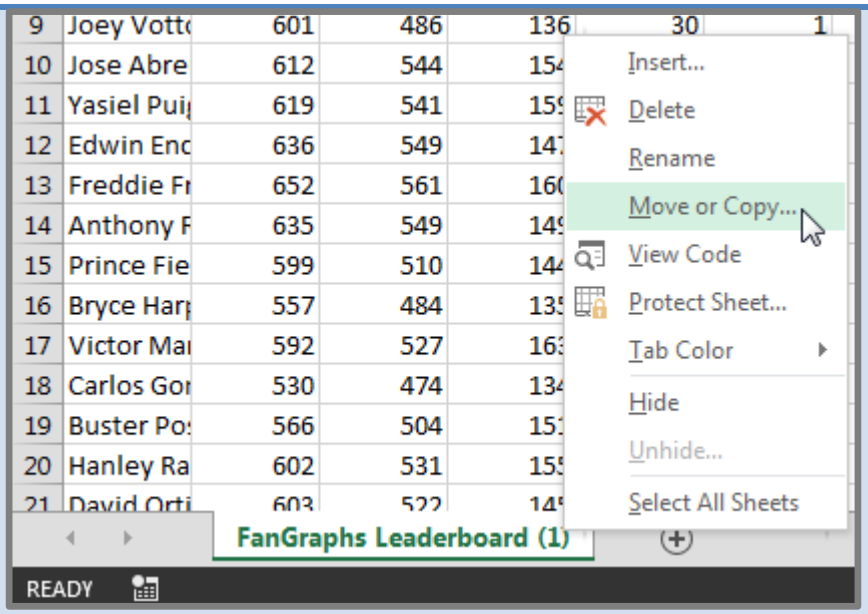
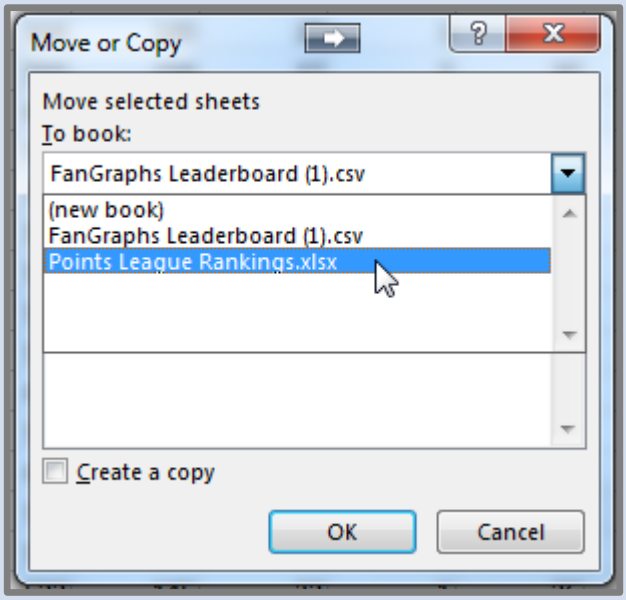
If you're familiar with Excel and using VLOOKUPs, Player IDs are the item we'll be matching upon to start pulling information around our Excel rankings file. If you have no idea what I just said, don't worry. We'll get there soon.

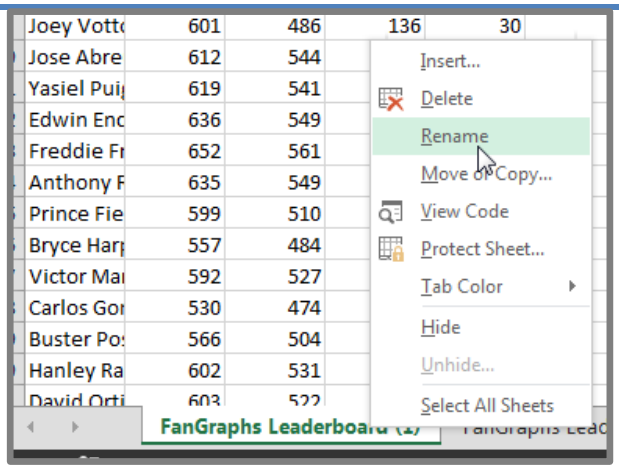
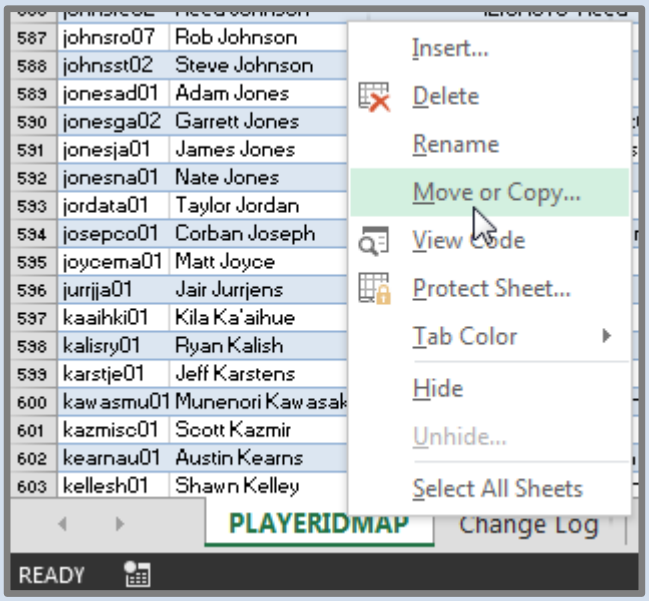
Let's get started building our Excel file!

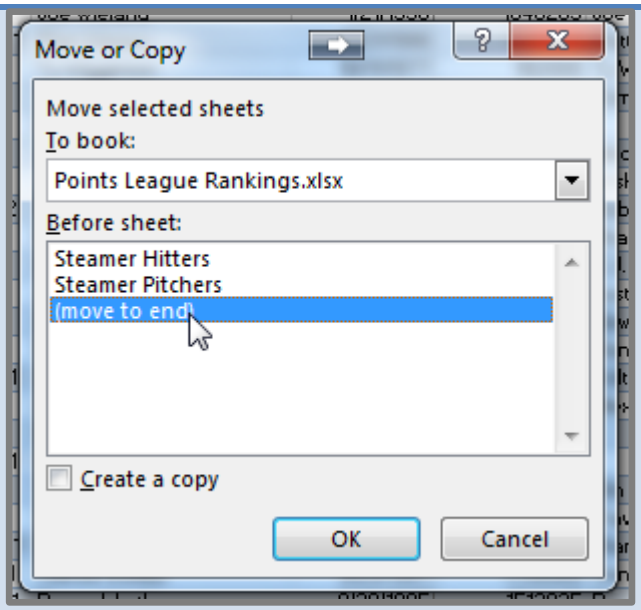
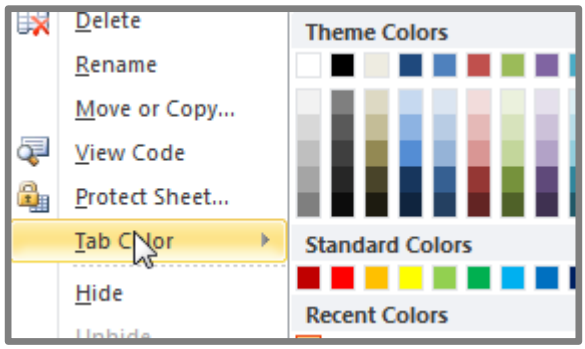
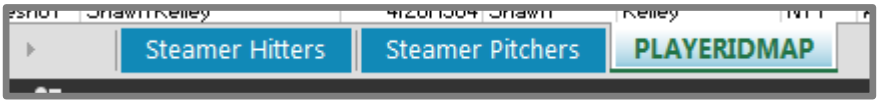
STEP-BY-STEP INSTRUCTIONS

Step	Description
1.	Open Excel and save a blank new file to hold our points league rankings.

Step	Description
	
2.	Download the pitching and hitting projections of your choice. For this example I will be using the Steamer projections available at Fangraphs.  Be sure to download both the hitter and pitcher projections. To download the data from Fangraphs, click the "Export Data" link on the web page.  This will download a CSV file to your computer.
3.	Locate the downloaded hitter and pitcher projections on your computer.  As you download more and more reports from Fangraphs they will be sequentially numbered (1), (2), etc. Open the hitters file in Microsoft Excel first. Right click on the tab and select the option to "Move or Copy...".

Step	Description
	 At the next menu, click the drop down menu. Choose to move the projections to your rankings Excel file (created above) by selecting the rankings file from the drop down list. Then hit "OK".  Repeat this step for the pitcher projections.
4.	Right-click on your hitter and pitcher projection tabs and choose the "Rename" option.

Step	Description
	 It will be important to name your spreadsheet tabs with meaningful names so you can easily keep track of what each of the spreadsheet represents. I will name my tabs "Steamer Hitters" and "Steamer Pitchers".
5.	Download and open the [SFBB Player ID Map](#) (click that link and it should begin to download). Right-click on the "PLAYERIDMAP" tab.  In the “Move or Copy” menu, select your rankings spreadsheet in the “To book:” drop down menu (we’re copying the Player ID Map into the Rankings file).

Step	Description
	 Choose to move the PLAYERIDMAP to the end of the rankings file and click "OK".
6.	You're going to be looking at this spreadsheet for a significant amount of time, so you should spend a minute on the aesthetics. Right click on the tabs and choose the option to add some color to this thing ("Tab Color").  If you're interested, Smart Fantasy Baseball Blue is custom color 17R, 137G, 183B on the RGB scale. 
7.	We're done. Save the file.

WRAP UP

At this point we have downloaded some powerful hitter and pitcher projections and incorporated a listing of player IDs. In the next part of this book we'll create a "Settings" tab where we will document the scoring settings for your league.

DO YOU HAVE ANY QUESTIONS?

Do you have questions about Part 1? Or want to see what others have asked? Check here.

EXAMPLE EXCEL FILE

Download the example spreadsheet illustrating the work done in this part here. Or you can download all spreadsheets for the entire book here.

PART 2 – SET UP LEAGUE SCORING SETTINGS

INTRODUCTION

In this second part of the book, we'll create a new tab in our Excel file to document our league's scoring settings. We'll use Excel's "Name" feature so we can calculate projected points for all players and easily make changes to the scoring system in the future.

EXCEL FUNCTIONS AND FORMULAS IN THIS PART

Below are the Excel functions and formulas used in this part of the book. If you're already familiar with what these are, you can skip ahead.

NAMED CELLS (OR NAMED RANGES)

Excel has a feature called "Names", where you can give a cell, a group of cells, or an entire table, a name. After giving a cell a name, you can then use the name in calculations.

In this part of the book we'll give names to the point values of each scoring category for our league. Let's assume each HR for a hitter is worth 9 points.

	A	B	C	D	E
1	Hitter Points			Pitcher Points	
2	AB	-1		IP	6
3	H	5		K	2
4	BB	3		BB	-2
5	2B	3		HA	-3
6	3B	5		SV	5
7	HR	9		HD	4
8	SB	3		HRA	-12

We can name this point value as "H_PTS_HR".

If we're later trying to determine how many points Javier Baez will earn from home runs, we can multiply Baez's projected home runs by "H_PTS_HR" instead of multiplying by 9 or by cell B7 (in the image above).

	A	B	C	D
1	Player Name	HR	HR PTS	
2	Javier Baez	28	=B2*H_PTS_HR	

If you're familiar with the basic concepts of computer programming, setting the point value of home runs equal to a name is like using a variable.

The benefit of this is that we can later change the 9 to a different value. This is especially useful if we play in multiple leagues or if the scoring format changes.

It becomes very easy to change the scoring system without having to search within complex formulas. And we also don't need to flip back and forth and remember that the HR point value was in B7 (as opposed to B6 or B8).

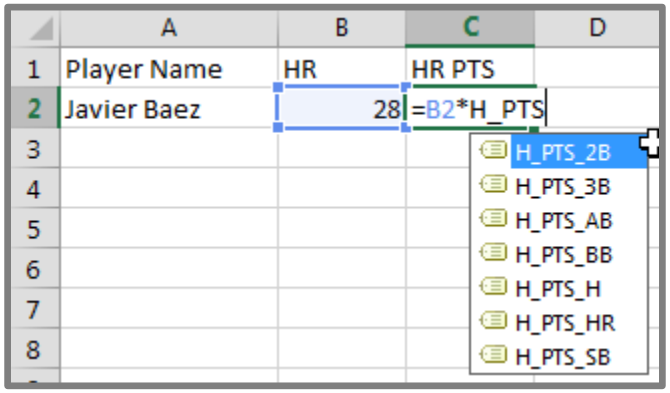
Using a name also gives the formula "meaning". It's a lot easier to understand this:

= B2 * H_PTS_HR

Than it is to understand this:

= B2 * B7

Another helpful benefit is that Excel makes all of your Names available through a type-ahead feature. So if you know you have a series of Names that start with "H_PTS_", you can see all of them by typing out part of the name. This works no matter what tab of the Excel file you are on, meaning you don't have to flip back and forth to figure out the exact cell holding the point value.



Using Cell Shading to Indicate Meaning

As we continue to build a spreadsheet that will eventually be quite complex, it can be helpful to indicate which cells are "input" cells and which ones are "calculated" (formula) cells. An easy way to denote this is by using cell shading (or coloring).

An "input" cell would be facts or assumptions that will later be used in formulas for calculating projected points and player rankings. For example, the number of points for each home run hit or the number of teams in the league.

A "calculated" cell will obviously be some kind of formula we enter in Excel.

The color coding will help remind you what cells you can change in the future (inputs) and what cells you should leave alone (formulas, calculations).

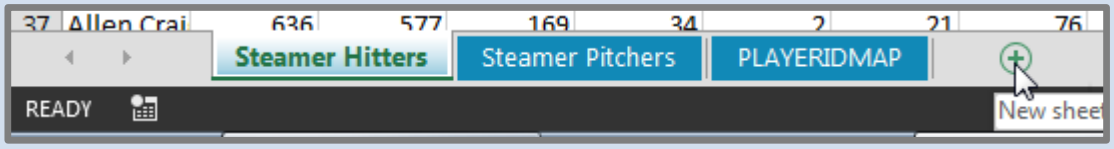
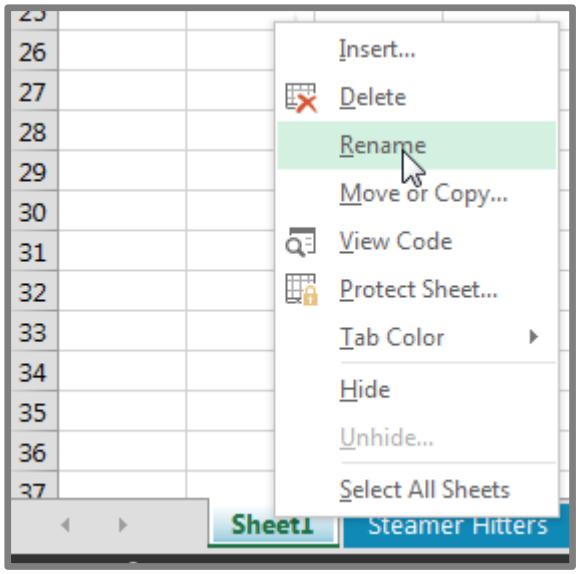
You can use your own color scheme, but for the rest of the series I will shade cells blue if they are "input" cells and a light red if they are "calculated" cells.

Besides the meaning behind the color coding, this also offers a nice intimidation factor to your opponents at the draft table. Who knows, someone might just think twice about getting in a bidding war with you if you've got a powerful looking spreadsheet on-screen.

ADJUST FOR YOUR LEAGUE'S SCORING SETTINGS

As I mentioned earlier, the example league I'm using to create these rankings is a bit unique. The league is loosely based on a scoring system suggested for Fangraphs Ottoneu leagues. It is likely very different than the scoring system in your league. Accordingly, you will need to use judgment and tailor the steps below to fit your league's specific scoring system.

STEP-BY-STEP INSTRUCTIONS

Step	Description
1.	Add a new sheet to your Excel file. The method of doing this will vary depending on the version of Excel you are using, but a keyboard shortcut to add a new sheet is SHIFT + F11 at the same time. 
2.	Right-click on the blank sheet and choose the option to "Rename".  Name this sheet "Scoring Settings".
3.	Visit your league's website. Find the settings page and locate the list of point values for each stat category.

Step	Description

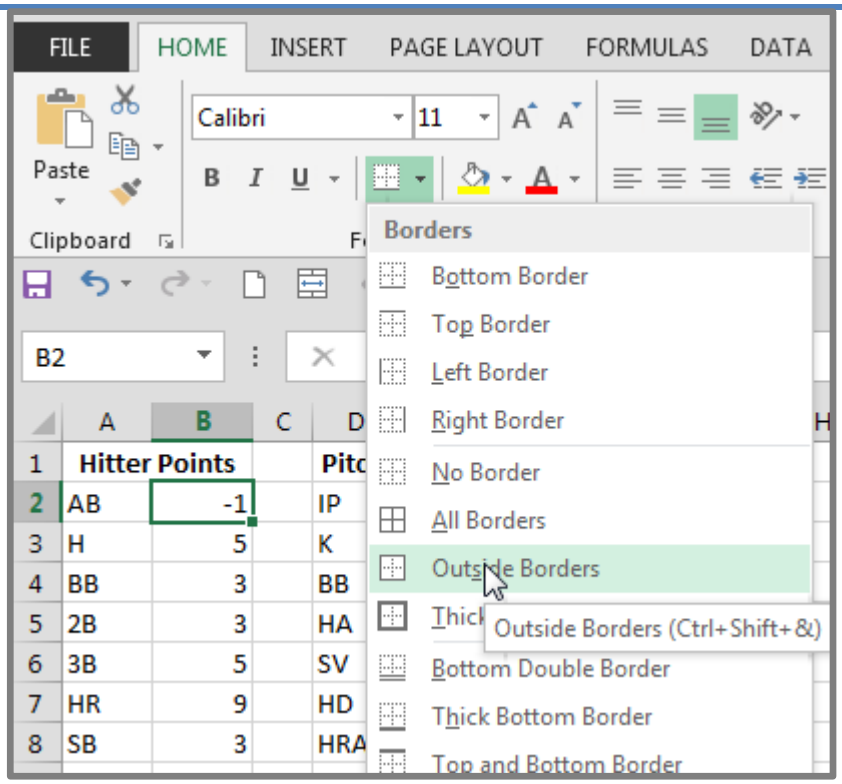
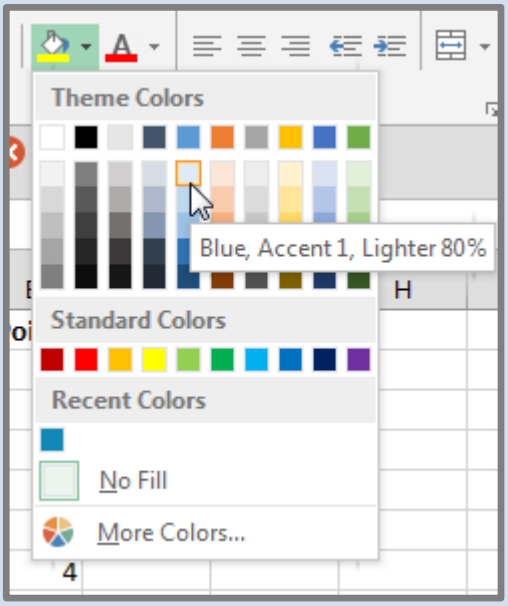
SCORING		
Batting	Doubles (2B)	3
	Home Runs (HR)	9
	Stolen Bases (SB)	3
	Hits (H)	5
Pitching	Innings Pitched (IP)	6
	Strikeouts (K)	2
	Walks Issued (BB)	-2
	Holds (HD)	4

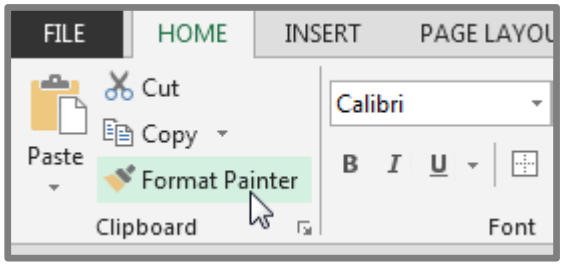
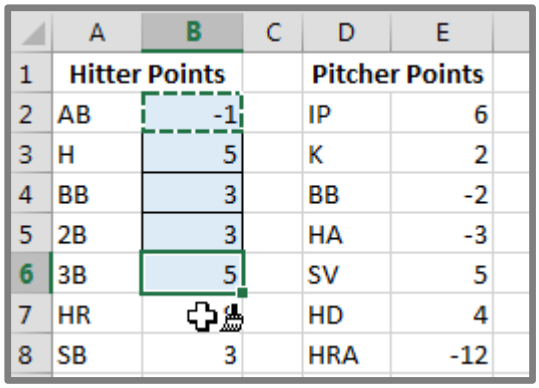
On your "Scoring Settings" sheet, create a list of the various scoring categories and the point value for each.

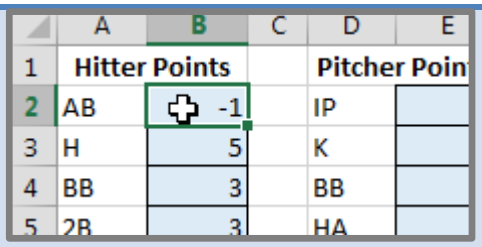
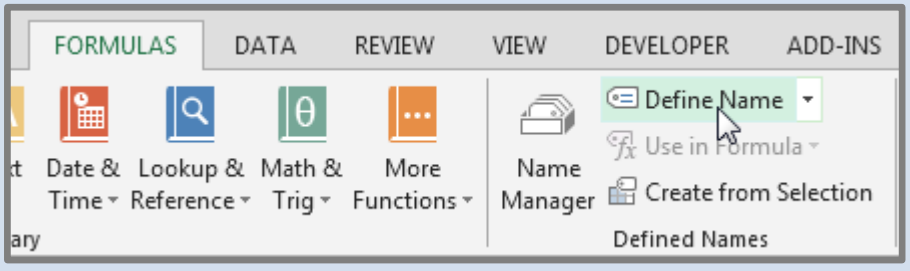
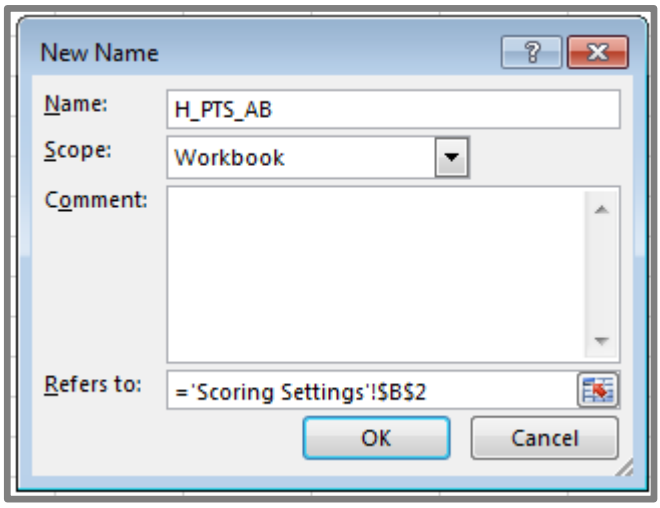
	A	B	C	D	E
1	Hitter Points			Pitcher Points	
2	AB	-1		IP	6
3	H	5		K	2
4	BB	3		BB	-2
5	2B	3		HA	-3
6	3B	5		SV	5
7	HR	9		HD	4
8	SB	3		HRA	-12

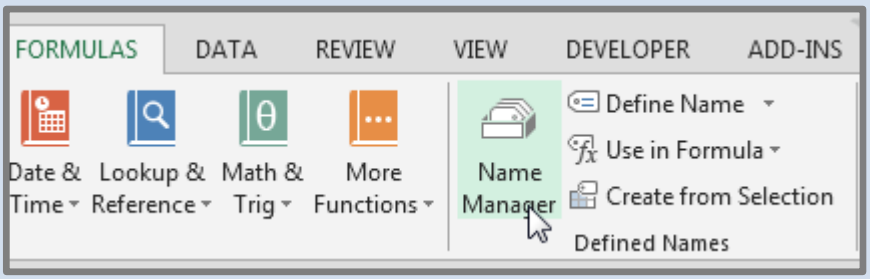
4. In order to apply the concept of shading cells discussed above, I first place a border around the cells to point value cells.

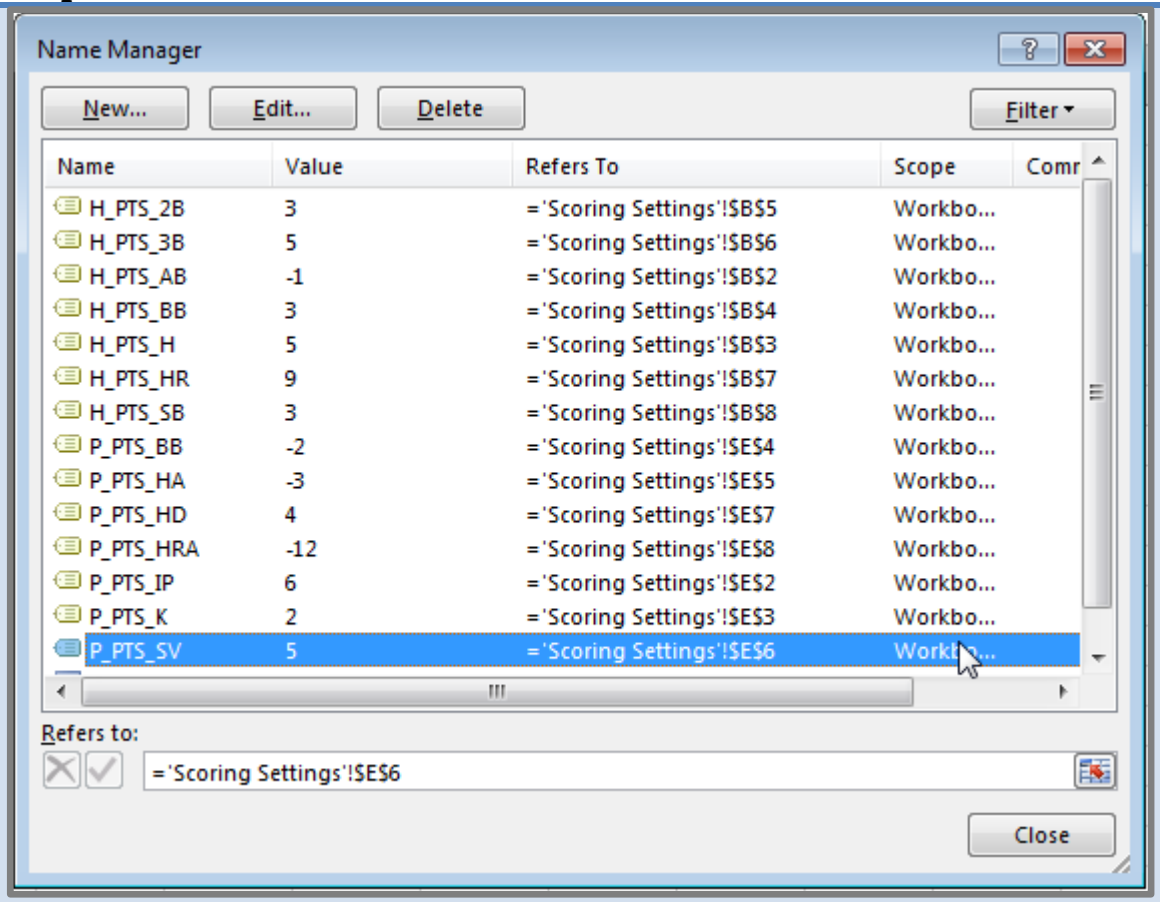
In my example file, I want to format cell B2. To do this click once on cell B2 and select the "Borders" drop down menu on the Ribbon. Then choose the "Outside Borders" option.

Step	Description
	
5.	Cell B2 will be an input cell that should be shaded blue. So while you still have B2 selected, click the "Fill Color" drop down arrow (the paint can icon) and click on the desired shade. 
6.	To quickly format the other input cells, while still selected on cell B2, double-click the "Format Painter" icon (looks like a paint brush).

Step	Description
	Format Painter allows you to copy all formatting from one cell to the next selected cell. If you double-click on Format Painter, you can continue to click on many cells and they will all take on the formatting (a lot of people who know about Format Painter don't know about the double-click option!). We're going to use Format Painter to make all the other point values blue and outlined.  While the Format Painter is still active (you can tell it's active when you see the paint brush icon next to your cursor), simply click in all the other cells containing scoring point values.  After you have selected all the point value cells, hit your ESC key to exit the Format Painter.
7.	In order to calculate projected points for all players, we will need to reference and use these scoring values in future formulas. To make it easier to reuse these figures, we will set them up as Named Cells. To do this, first click on one of your hitter point values (I'll use B2 from my example).

Step	Description
	 Then click on the "Formulas" tab of the ribbon and select the "Define Name" button 
8.	In the window that pops up, enter a meaningful name that you'll later be able to recognize. For example, to name the point value for At Bats, I chose the name "H_PTS_AB". This will indicate this is the point value for hitter at bats. Click OK to save this name. 
9.	Repeat this process for all of your hitting and pitching point values. I used these names for my hitting categories: • H_PTS_AB • H_PTS_H

Step	Description
	• H_PTS_BB • H_PTS_2B • H_PTS_3B • H_PTS_HR • H_PTS_SB I used these names for my pitching categories: • P_PTS_IP • P_PTS_K • P_PTS_BB • P_PTS_HA • P_PTS_SV • P_PTS_HD • P_PTS_HRA Note that Excel will not allow you to start a Name with a number (so you couldn't name your cell "2B_PTS_H"). It may be a good idea to view the list of all names in your Excel file when you're done. To do this, click on the "Name Manager" button of the "Formulas" tab.  Look over your list of names and make sure you haven't missed anything.

Step	Description
	
10.	We're done. Save the file.

WRAP UP

At this point in the process we have a file with projections, player IDs, and our league scoring settings. In the next part of this book we'll start pulling the projection information into new sheets where we can begin to calculate each player's projected points for the season.

DO YOU HAVE ANY QUESTIONS?

Do you have questions about Part 2? Or want to see what others have asked? Check here.

EXAMPLE EXCEL FILE

Download the example spreadsheet illustrating the work done in this part here. Or you can download all spreadsheets for the entire book here.

PART 3 – VLOOKUP, EXCEL TABLES, AND STRUCTURED REFERENCES

INTRODUCTION

In this part of the book we'll use Excel's VLOOKUP and IFERROR formulas as well as Table and Structured Reference features to pull hitter information and projections from other areas of the spreadsheet in order to create our hitter rankings tab.

EXCEL FUNCTIONS AND FORMULAS IN THIS PART

Below are the Excel functions and formulas used in this part of the book. If you're already familiar with what these are, you can skip ahead to the step-by-step instructions.

VLOOKUP

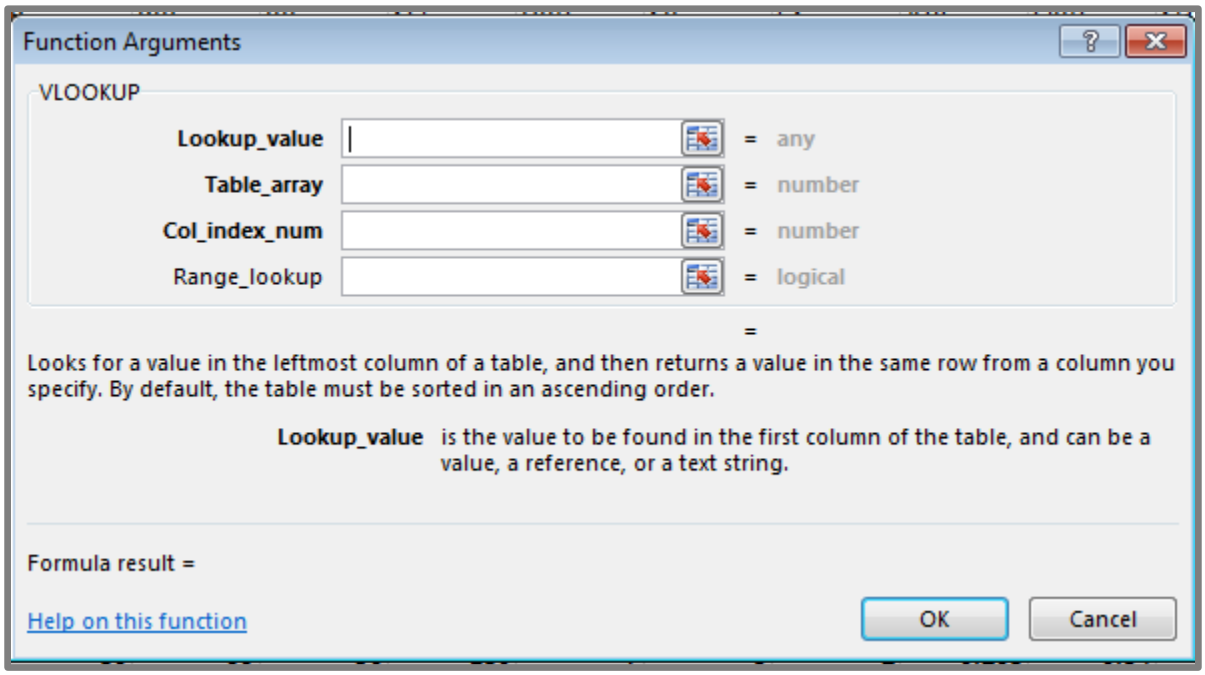
One of the most powerful Excel formulas, in my opinion. And it's easier to use than you might think.

This formula searches the first column of a table for a desired value (a player ID) and then returns a value that is in the same row but in a separate column. For example, we might tell Excel to go into a table of projection data, locate the player ID for Billy Hamilton (10199), and give us back the number in the fourteenth column (column N, which holds the number of SBs).

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	playerid	Name	PA	AB	H	2B	3B	HR	R	RBI	BB	SO	HBP	SB
2	10199	Billy Hamilton	669	611	154	25	6	8	77	47	44	119	3	69
3	8203	Dee Gordon	663	605	158	20	10	3	74	43	42	107	5	55
4	4712	Ben Revere	622	583	166	18	5	3	64	42	26	58	4	37
5	5417	Jose Altuve	668	616	185	38	3	8	84	62	37	61	5	35
6	4727	Jacoby Ellsbury	630	570	154	27	4	16	81	65	47	94	4	31

This formula requires four inputs:

VLOOKUP(lookup_value, table_array, col_index_num, range_lookup)



1. **Lookup_value** - This is the value we want to search for in the table of data (e.g. Billy Hamilton's player ID 10199). In the rankings spreadsheet, we're mostly going to use player IDs for this. "Hey Excel, go look for this player ID".

2. **Table_array** - This has to be two or more columns of data. Excel will look for the Lookup_value in the first column in the set of data. You do not necessarily need this to be the first column on a spreadsheet tab (you don't have to use Column A of a sheet, the first column of your Table_array could be Column G). But Excel is going to look through the first column you provide. "Hey Excel, here are fifteen columns of data for you, look through everything in the first column for the Lookup_value."

3. **Col_index_num** - This is the column number of the Table_array that contains your desired information. This has to be a number and it has to be within the Table_array you provided. For example, if your table_array only has five columns, but you put a six for Col_index_num, you'll have a problem. "Hey Excel, the fourteenth column has projected stolen bases. After you find Billy Hamilton's player ID, tell me how many stolen bases are in that fourteenth column."

4. **Range_lookup** - This input can be either "TRUE" or "FALSE". If you use "TRUE", Excel will look for an approximate match of the lookup_value

(PLAYERID). If you enter "FALSE", Excel will only look for an exact match. This is an optional input, but I feel very strongly that it must be used and that "FALSE" is the option selected. You may otherwise get the wrong projections showing up for players.

TABLES (NAMED RANGES, STRUCTURED REFERENCES)

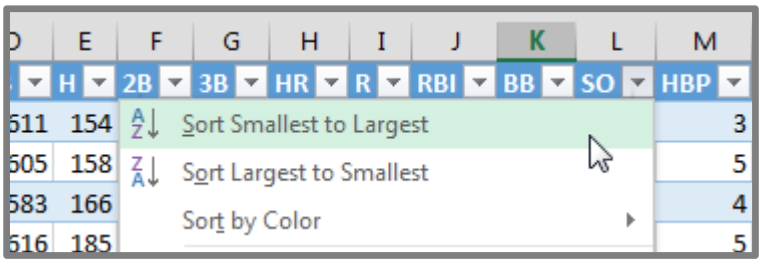
Similar to how we named individual cells in Part 2, Excel has functionality that allows you to convert a block of data (player projections) into a named table. There are quite a few benefits to using tables:

Tables have names. This is great for the Table_array input in the VLOOKUP formula. We can give the projection sheet the name "STEAMER_H" (for Steamer Hitters projections) and use that instead of traditional way of selecting data in Excel (if we didn't use "STEAMER_H we would have to use something like 'Steamer Hitters'!A1:W500). Not only is this a huge time saver (using your mouse to scroll and select 20 columns and 500 rows takes a long time), but it gives your formulas meaning. When you look back at your VLOOKUP formula and see "STEAMER_H", you'll easily be able to remember that you're looking up projected Steamer hitter information.

Columns have names. I have a hard time remembering what column projected HRs are in. But I don't need to if I know that the column name is "HR". If you don't use a table, you're stuck trying to remember things like, "were HRs in column G, H, or I?". And even if you remember the column letter, then you have to figure out if column I is column number 8, 9, or 10? When referring to a column, use the following convention - TABLENAME[COLUMNNAME]. The column name is surrounded in brackets.

Formula consistency. In a table, all formulas within a column are identical. When you change the formula in one cell of a column, the rest of the column automatically updates too. No more editing a formula in one cell and having to copy it to hundreds of other cells in the same column.

Easy sorting and filtering. When you create a table the filter drop down menus appear automatically. Sorting and filtering is as easy as clicking a drop down arrow.



COLUMN

This function returns the column number of a cell or range of data. The function only requires one input; the cell or range to be evaluated:

COLUMN(TableName[ColumnName])

Let's use a real example to illustrate:

COLUMN(STEAMER_H[SB])

This formula will look for the stolen bases column in the Steamer Hitter Projections and will return the column number. If SB are in column N, this formula calculates to 14.

See how this formula converts column N into an easy to use number? We're going to combine this with the VLOOKUP formula mentioned above.

IFERROR

The IFERROR function allows us to control what happens when another formula being used is calculating out to an error.

The image below is a great example of this. In this spreadsheet we have a series of VLOOKUP formulas that instruct Excel to go find Kendrys Morales' player ID (moralke01) in the "Steamer Projections" tab.

You may recall that during the 2014 season Morales remained an unsigned free agent until well into the season, so he was not included in the Steamer projections at that time. Because he was not included, the VLOOKUP formula could not find his player ID and could only calculate to this "#N/A" error message.

	A	B	C	D	E	I	J	K	L	M	N	O
1	PLAYERID	LNAME	FNAME	TEAM	POS	H	HR	R	RBI	BB	SO	SB
116	jonesga02	Jones	Garrett	PIT	1B	105	16	51	56	39	115	2
117	scutama01	Scutaro	Marco	SF	2B	80	3	35	25	23	26	2
118	moralke01	Morales	Kendrys	SEA	1B	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

The IFERROR function will allow us to replace the error message with any value of our choice. It essentially works by telling Excel, "If this other formula I'm using comes back with an error, use this instead".

Using IFERROR we could instead make Kendrys Morales line look like this:

A	B	C	D	E	I	J	K	L	M	N	O
PLAYERID	LNAME	FNAME	TEAM	POS	H	HR	R	RBI	BB	SO	SB
moralke01	Morales	Kendrys	SEA	1B	0	0	0	0	0	0	0

The formula requires two inputs:

IFERROR(value, value_if_error)

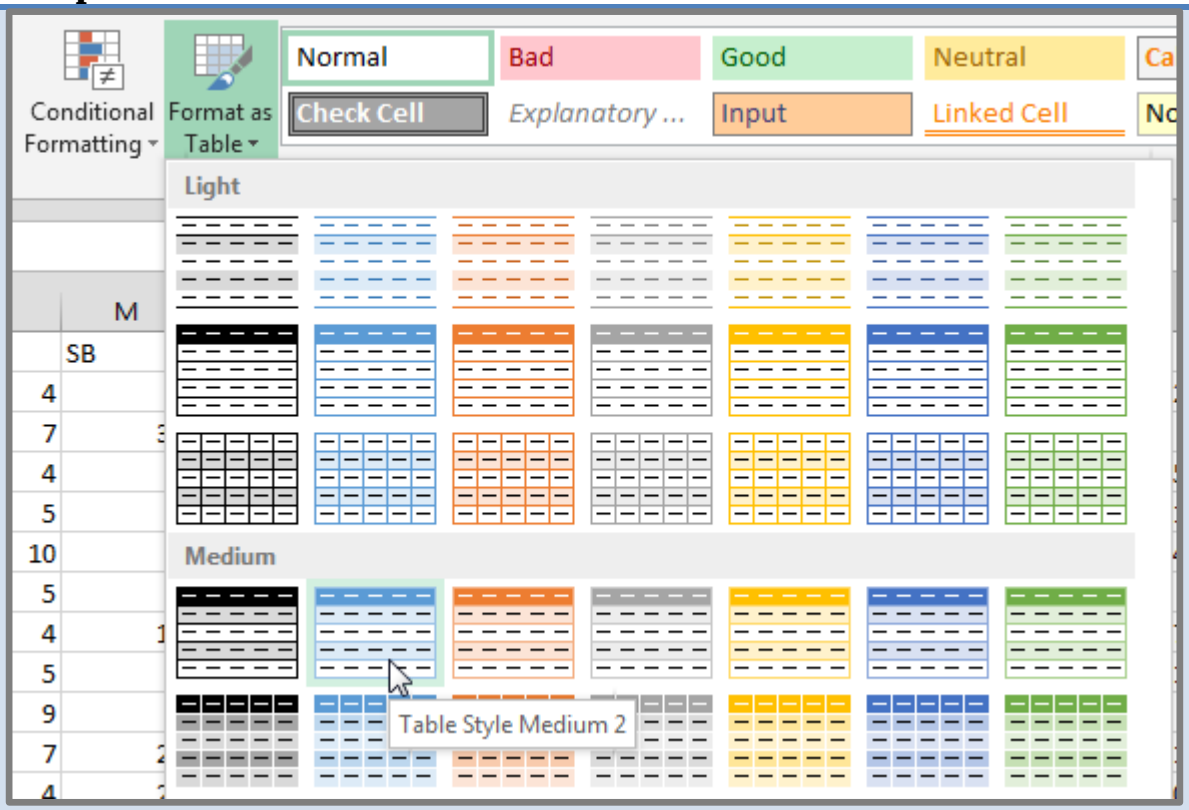
Value – This represents the formula or calculation we want Excel to perform. In our example above it will be the same VLOOKUP formula we already have entered.

Value_if_error – This represents the value or message we want Excel to return if the first argument, "Value", happens to be an error. In our example above we don't want the default "#N/A" error message that turns up if Excel cannot locate Kendrys Morales in the RoS projections. Instead, we could just ask for Excel to return zeroes for his projected stats.

STEP-BY-STEP INSTRUCTIONS

Step	Description
1.	Go to the "Steamer Hitters" tab of your Excel file. We will convert this to a "table" in Excel in order to make the data easier to work with. Click anywhere within the projection data. Then locate the "Home" tab in the Excel menu system. Click once on the "Format as Table" drop down, and then select your desired color scheme.

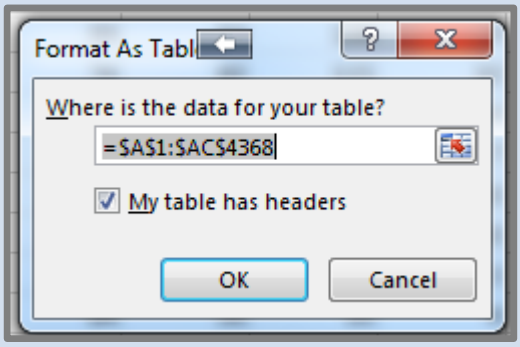
Step	Description



You will then be prompted to verify the range of cells in the table and that your table has a header row (e.g. Name, AB, H, HR, etc.).

You might notice that my example projection data goes out to column AC. Yours may have more or less columns. I believe the Steamer downloads contain additional information at certain times of the year, but if you look closely at the information in the rightmost columns, they're things we don't care about for fantasy (wRC+, WAR calculations, etc.).

As long as you have the main offensive categories and the "playerid" column, you're good.



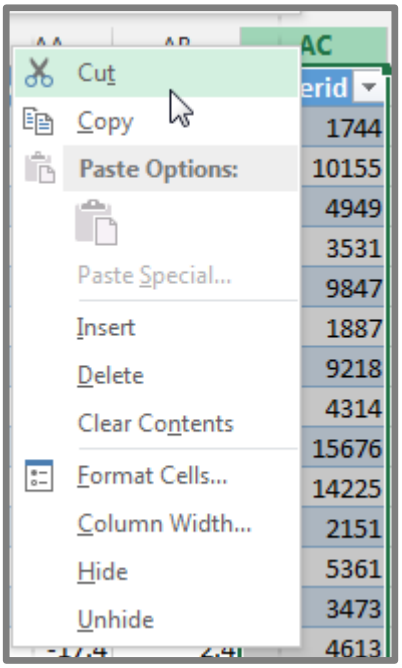
Check “My table has headers”. Click OK.

Step	Description
	After accepting this, your bland looking data will transform into a nicely formatted table.

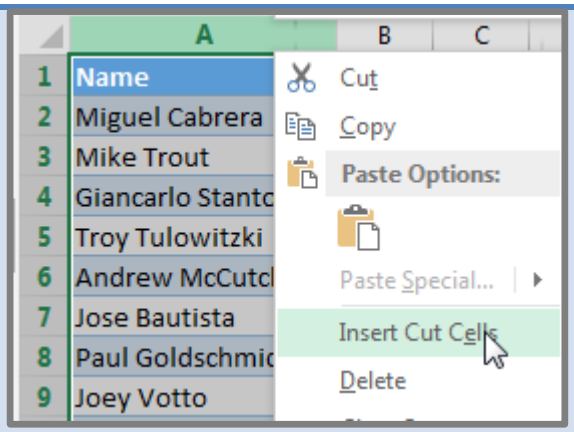
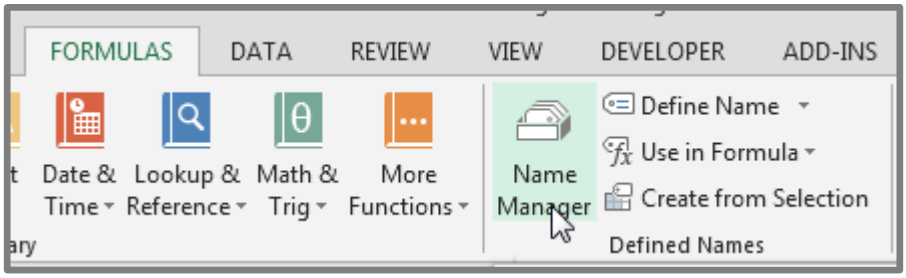
	A	B	C	D	E	F	G
1	Name	PA	AB	H	2B	3B	HR
2	Miguel Cabrera	648	567	180	38	1	32
3	Mike Trout	675	572	170	32	6	31
4	Giancarlo Stanton	642	544	151	33	1	40
5	Troy Tulowitzki	602	523	158	31	2	28
6	Andrew McCutchen	650	556	167	34	4	23
7	Jose Bautista	653	544	145	28	1	36
8	Paul Goldschmidt	650	555	156	37	2	30
9	Joey Votto	601	486	136	30	1	20
10	Jose Abreu	612	544	154	28	2	34

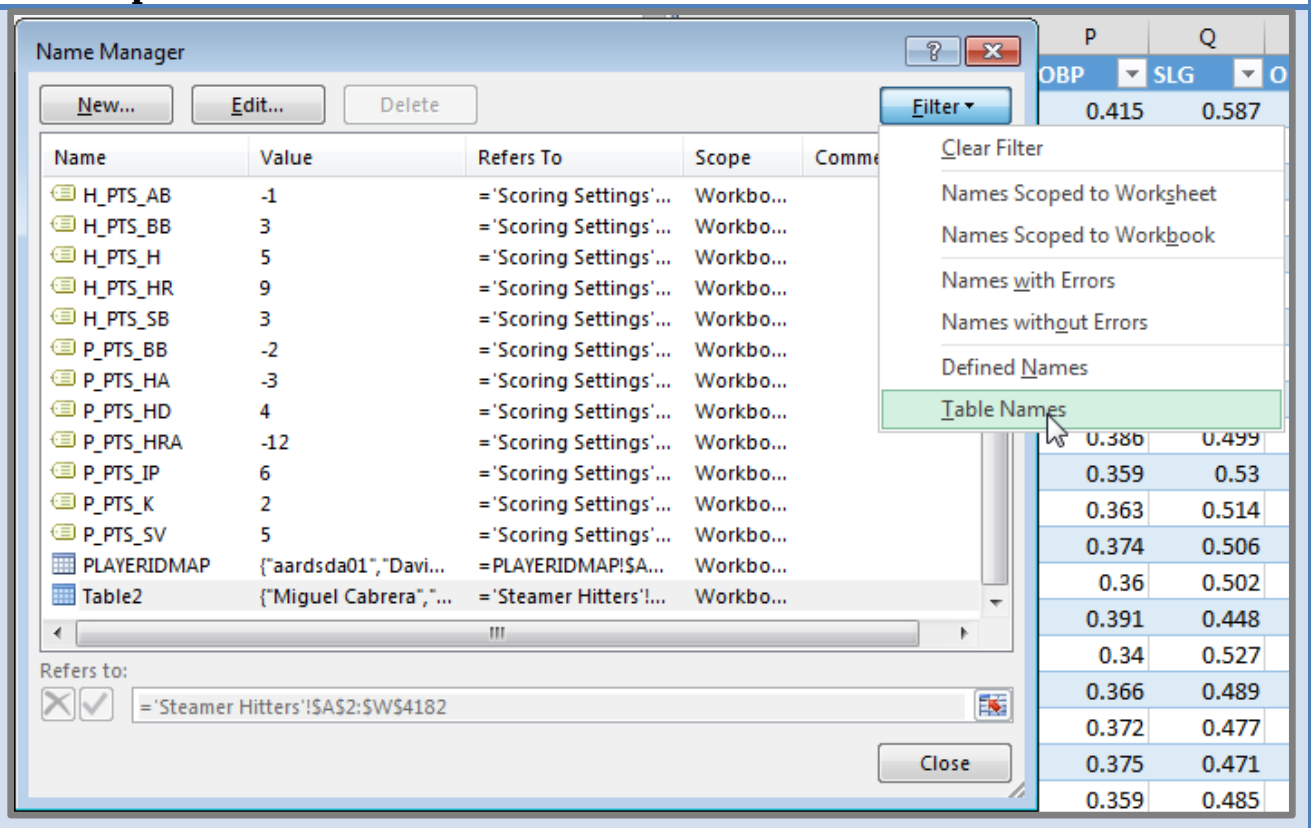
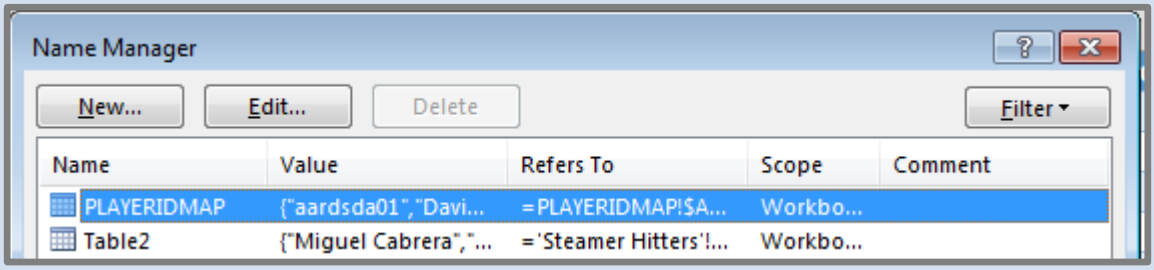
2. We'll later be pulling information from this table into other worksheets. To make the pulling of data easier we need to move the Fangraphs player ID to be the first column (you can use VLOOKUP if the player ID is in the first column, otherwise you're stuck using more difficult and/or multiple formulas).

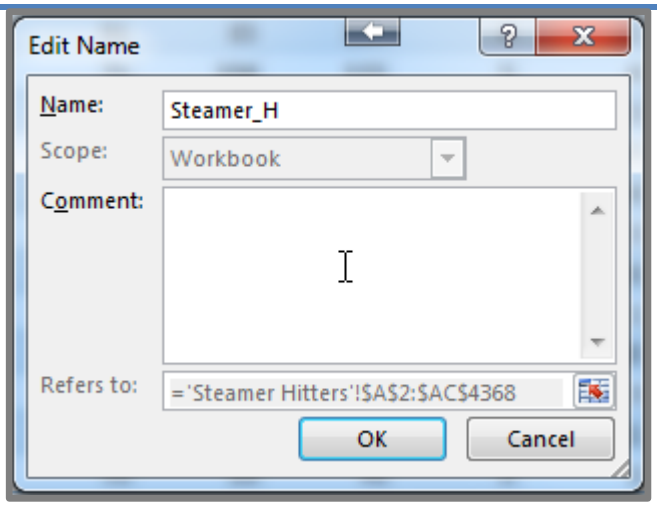
Right-click on the top of the Fangraphs player ID column (I right clicked on the "AC" column header) and Cut it.

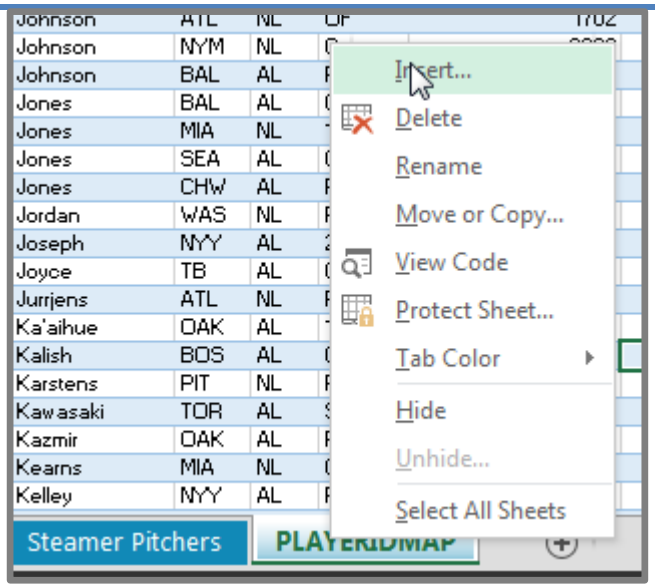
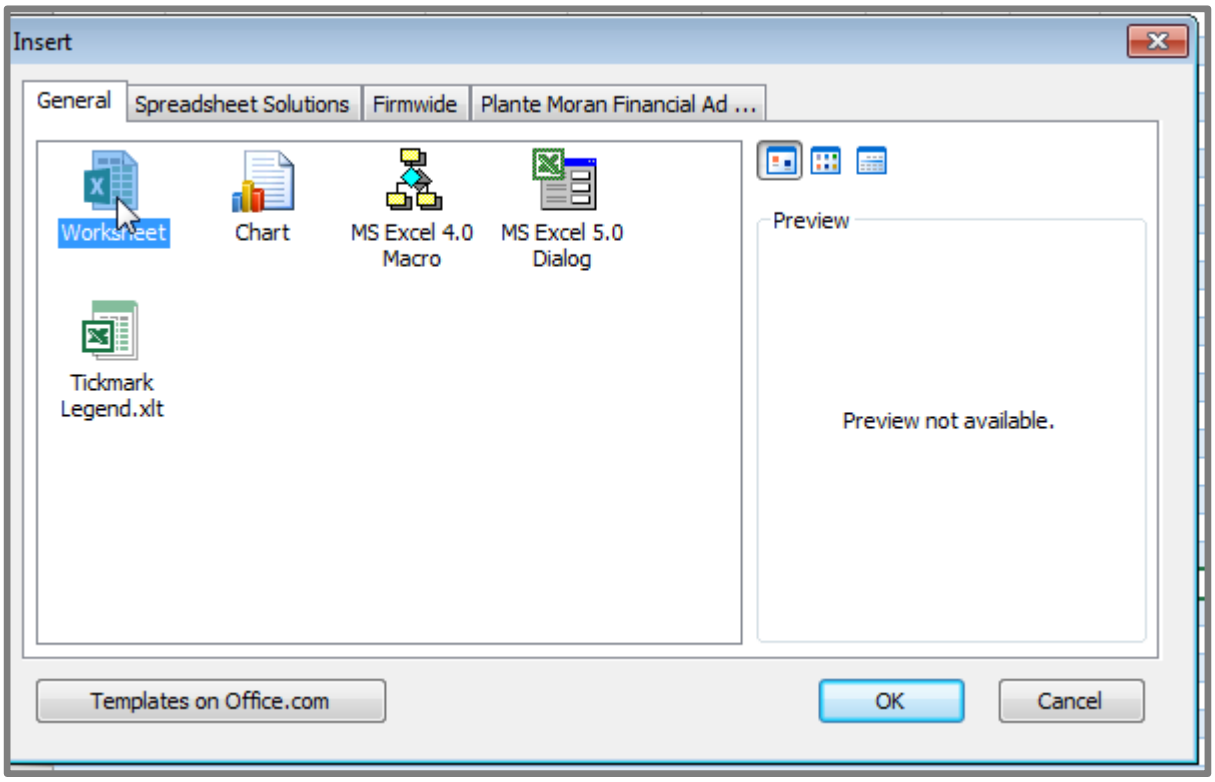


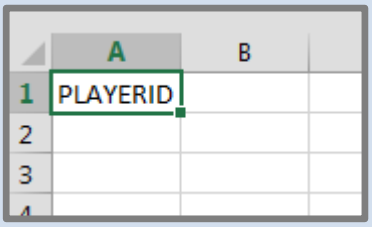
3. Now right-click on the top of the player name column (column header "A") and select "Insert Cut Cells".

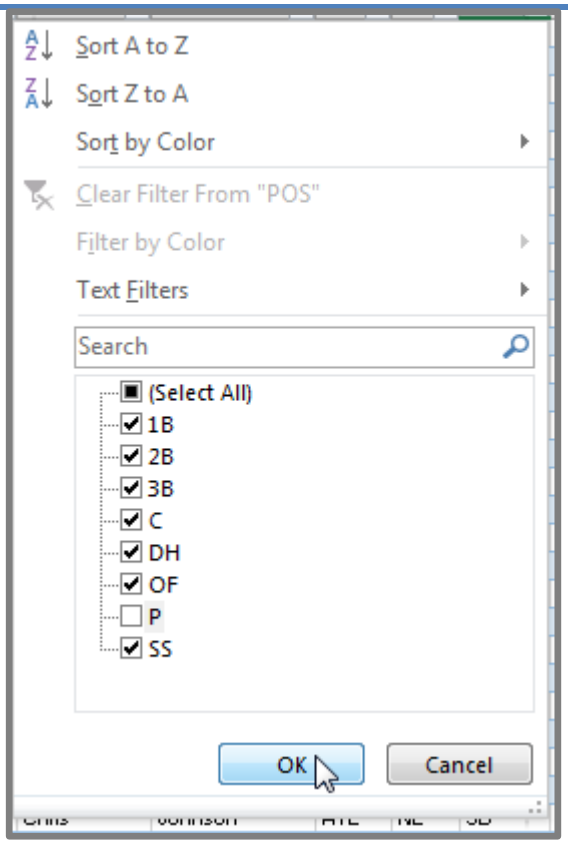
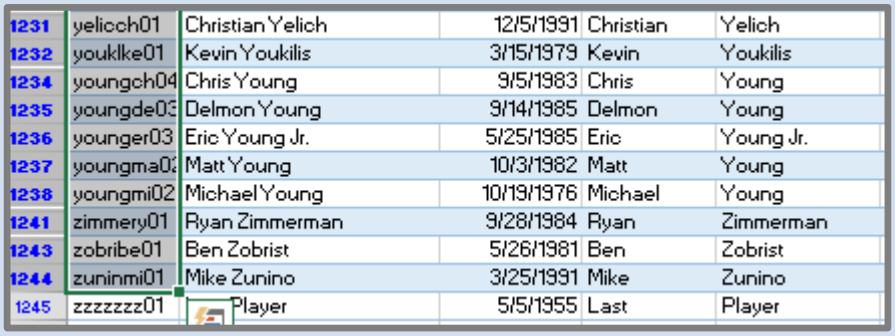
Step	Description
	
4.	Before we finalize this table, we should give it a name we can refer to in the future. Go to the “Formulas” tab on the Excel ribbon and click on the “Name Manager” button. 
5.	Because we created named cells in Part 2 of the book, it might be helpful to filter the Name Manager to only show table names. Do this by clicking the "Filter" drop down menu in the top right of the window. Then choose "Table Names".

Step	Description
	 Excel will give very generic names to a table, like “Table2”. It’s more helpful to give meaningful names to your tables. As you get more tables in a spreadsheet, it can become very difficult to remember the difference between “Table2” and “Table3”. Note how there is already a table named “PLAYERIDMAP”. I previously set up this table before you inserted it into your Excel file in Part 1 of this book.  Select your table from the list (it will probably be named "Table2") and click on the “Edit...” button.
6.	Give the table a meaningful name. I chose “STEAMER_H” to indicate these are the Steamer Hitter projections.

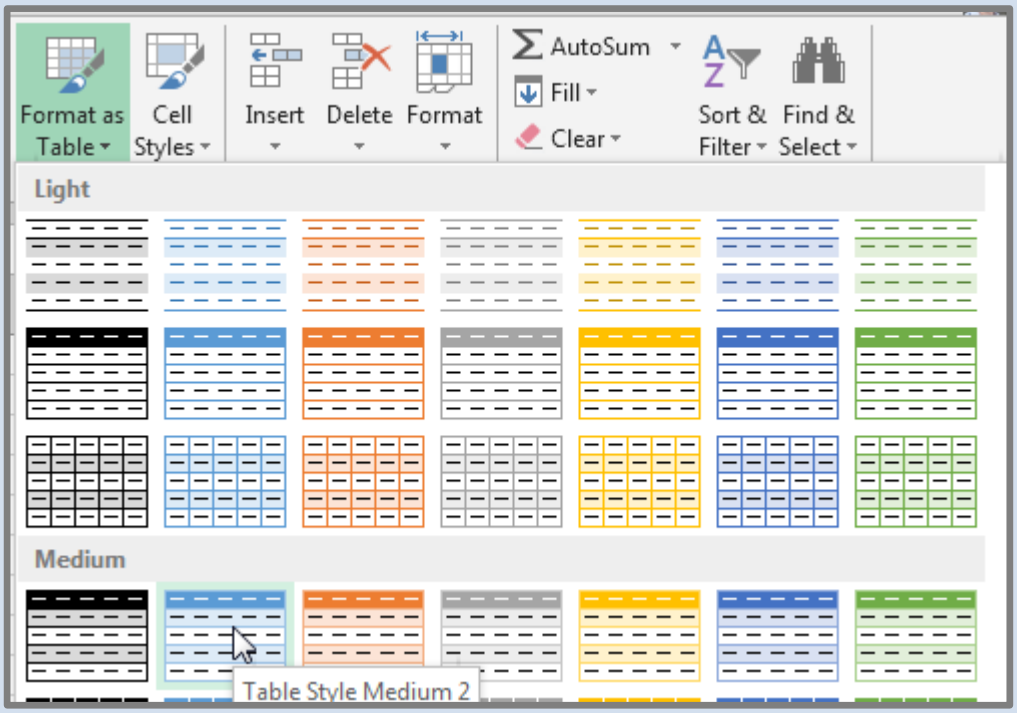
Step	Description
	 Click “OK” to close the “Edit Name” menu. Then click “Close” to exit the “Name Manager”.
7.	We now have two tables ready to pull hitter information from, PLAYERIDMAP and STEAMER_H. I’m going to pull and combine from these two tables into a new tab where I’ll calculate the hitter rankings. If you're wondering why I'm going through all of this trouble to set up multiple tabs and to keep all of this information separated, it's because I want this whole spreadsheet to be usable in future seasons. By keeping the PLAYERIDMAP in one area, projections in another, and rankings in another, we'll be able to easily update each of those components at later times. This spreadsheet can be used in the middle of the season to drop in Rest of Season Projections. It can easily be tweaked a little and used next year. You can read more about my design philosophy here.
8.	Right click on the “PLAYERIDMAP” tab and select the option to “Insert...”.

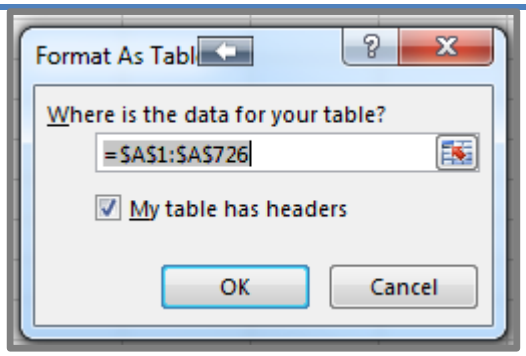
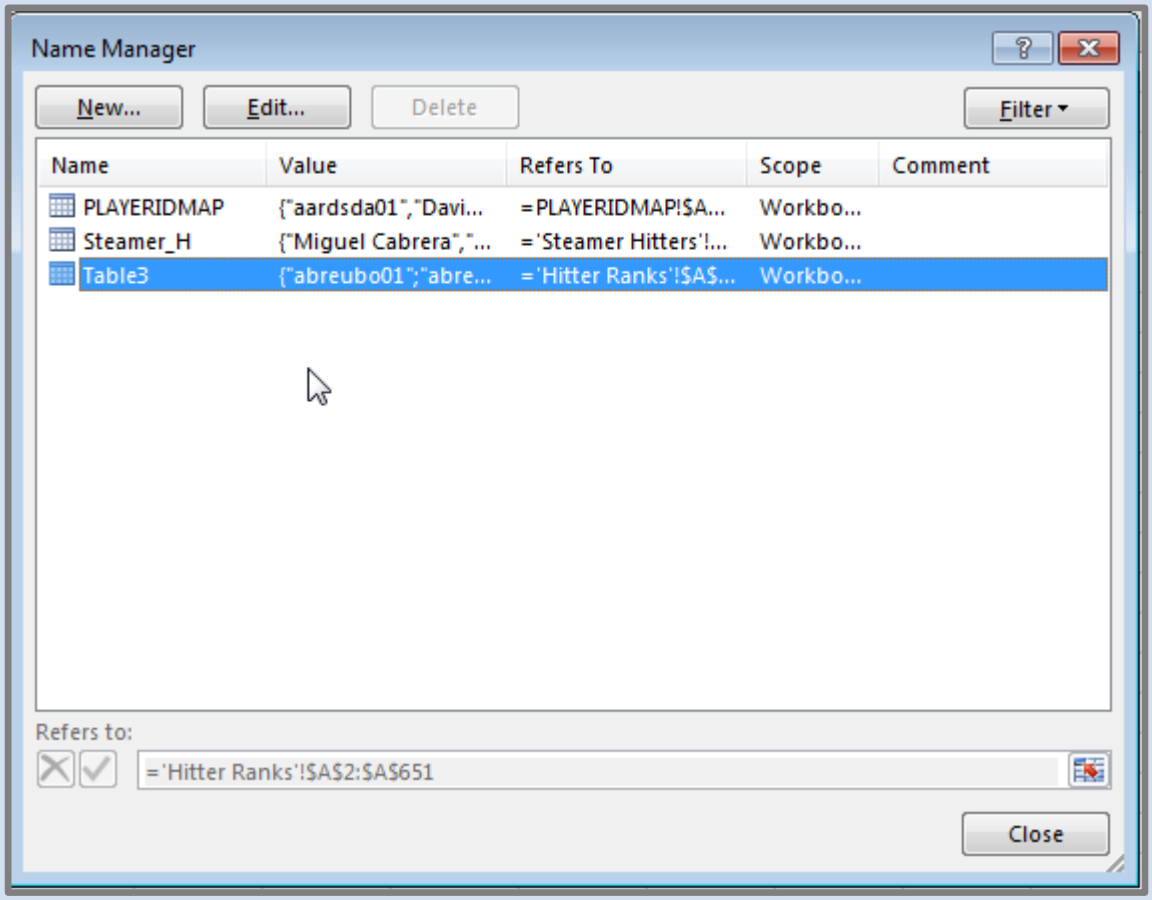
Step	Description
	 Choose the “Worksheet” option and click “OK”. 
9.	Right click on the new sheet tab and choose to “Rename”. Call this sheet “Hitter Ranks”.

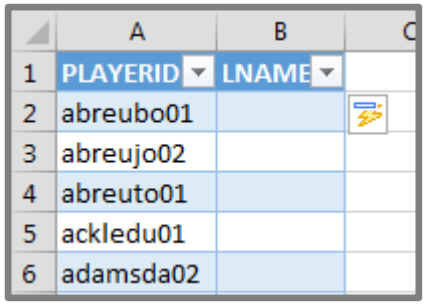
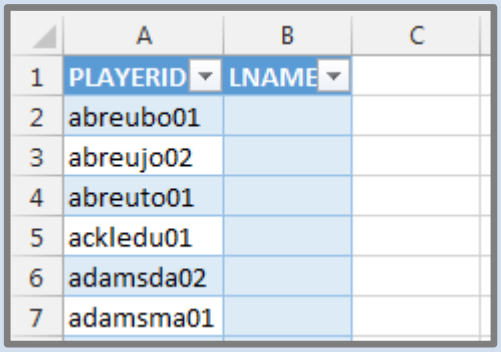
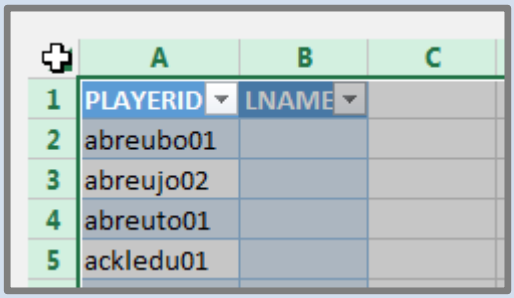
Step	Description
	After you've renamed the sheet, type "PLAYERID" into cell A1. This will be a column header for our next step. 
10.	As we talked about in the first part of this book, I like to use Baseball-Reference player IDs as the main ID system in my spreadsheets. That's because I can usually look at an ID and know who the player is (e.g. encared01 is Edwin Encarnacion). We want the first column of this new sheet to contain the Baseball Reference player ID and we only want hitters at this time. The PLAYERIDMAP sheet has a list of all fantasy-relevant players (for standard rotisserie leagues, at least). However, this sheet contains pitchers also. Because this sheet is an Excel table, it's easy to filter out those pitchers. Click on the drop down arrow on the "POS" column. You'll be presented with a list of all the positions. Uncheck the "P" value (for pitchers). Click OK to apply the filter.

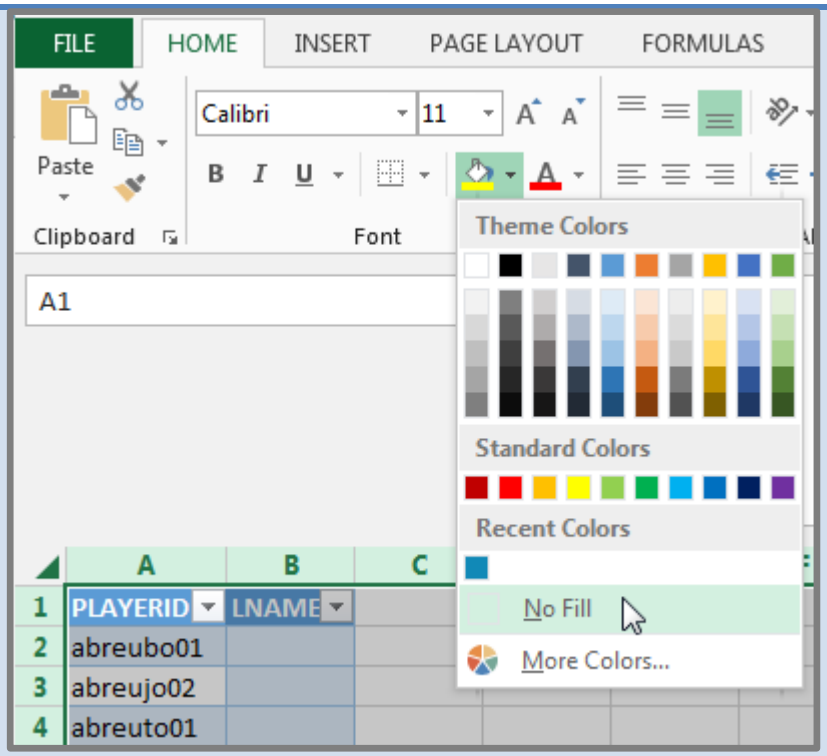
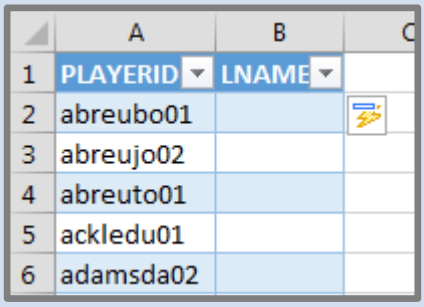
Step	Description
	 The Player ID Map will now list only hitters.
11.	Starting at the first player and ending with the last, click and drag within the "IDPLAYER" column (first column) and select all players (or select the first player and then use the keyboard shortcut SHIFT + CTRL + Down Arrow). Only select from this first column. Note, I also added a dummy player name "Last Player". You don't need to grab him, but it won't hurt if you do. 
12.	Copy this selected data. Return to the "Hitter Ranks" sheet. Then paste the data into cell A2.

1231	yelicch01	Christian Yelich	12/5/1991	Christian	Yelich
1232	youklke01	Kevin Youkilis	3/15/1979	Kevin	Youkilis
1234	youngch04	Chris Young	9/5/1983	Chris	Young
1235	youngde03	Delmon Young	9/14/1985	Delmon	Young
1236	younger03	Eric Young Jr.	5/25/1985	Eric	Young Jr.
1237	youngma02	Matt Young	10/3/1982	Matt	Young
1238	youngmi02	Michael Young	10/19/1976	Michael	Young
1241	zimmery01	Ryan Zimmerman	9/28/1984	Ryan	Zimmerman
1243	zobribe01	Ben Zobrist	5/26/1981	Ben	Zobrist
1244	zuninmi01	Mike Zunino	3/25/1991	Mike	Zunino
1245	zzzzzzz01	Player	5/5/1955	Last	Player

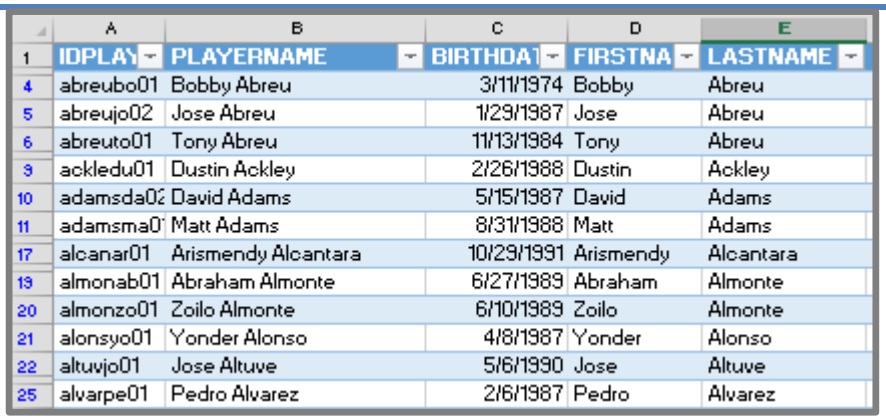
Step	Description
13.	Now that we're starting this new sheet, we should convert it to an Excel table. We will essentially repeat step 1 above, but for this new worksheet. Click once to select any player ID. Then locate the "Home" tab in the ribbon. Click once on the "Format as Table" drop down and then select your desired color scheme. 
14.	You will then be prompted to verify the range of cells in the table and that your table has a header row.

Step	Description
	 Check “My table has headers”. Click OK.
15.	Repeat steps 4-6 in order to give the table a more meaningful name. In my example, Excel defaulted the table name to “Table3”. I renamed mine to be “MYRANKS_H” (to indicate hitter ranks, because we’ll also be ranking pitchers). 
16.	Now for the fun part… pulling data from the other tabs. I’ll first add “Player Last Name” to the table.

Step	Description
	To expand your table, simply type “LNAME” into cell B1 and hit Enter (I typed into cell B1). Excel should automatically pull this new column into your table. 
17.	Your table shading may look like this instead of the image from step 16 (which has alternating shaded and non-shaded rows):  If so, click once in the area between the Column "A" header and the Row "1" header (the top left corner of all cells), to select all cells in the entire sheet.  Then click the "Fill Color" icon (looks like a paint can) drop down arrow and choose the "No Fill" option.

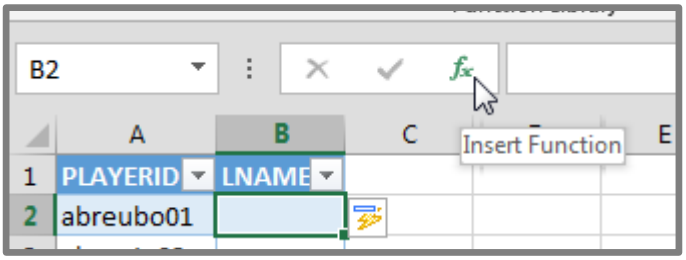
Step	Description
	 You should now see the proper alternating color scheme. 
18.	Our goal in Column B is to instruct Excel to take the PLAYERID from column A (e.g. "abreujo01"), go into the first column of PLAYERIDMAP, find the matching PLAYERID, and then pull back the corresponding LASTNAME. You can see in the image of the PLAYERIDMAP below that LASTNAME is in the fifth column (column E).

Step	Description

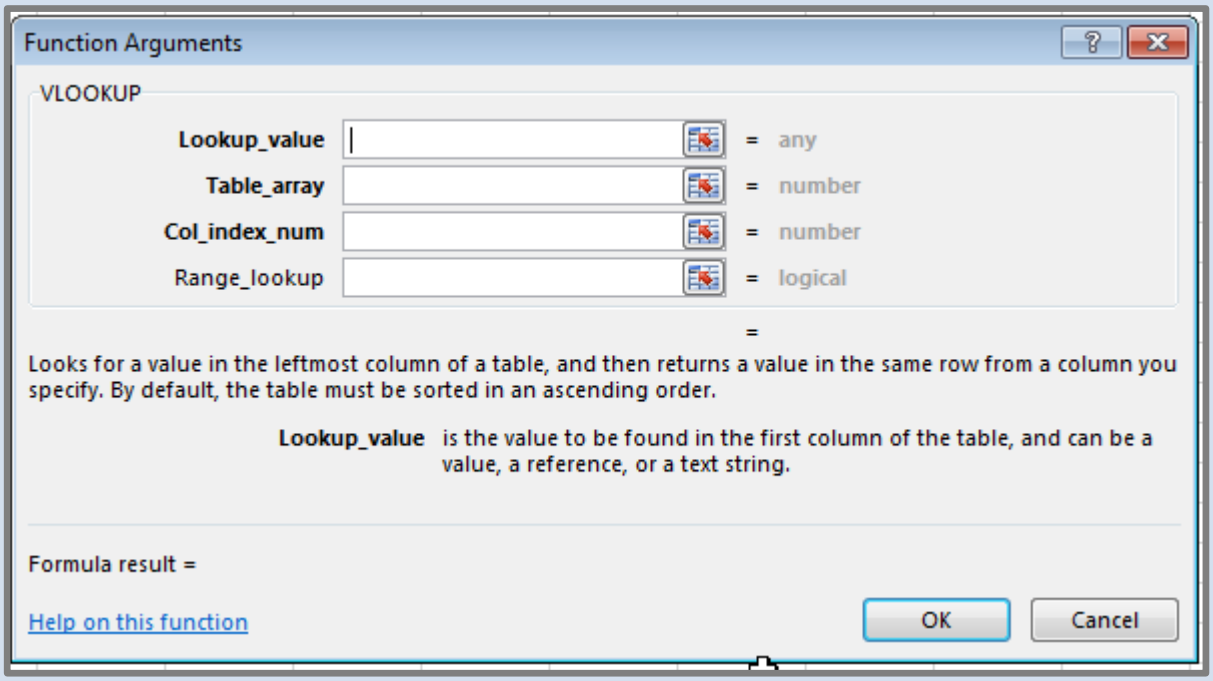


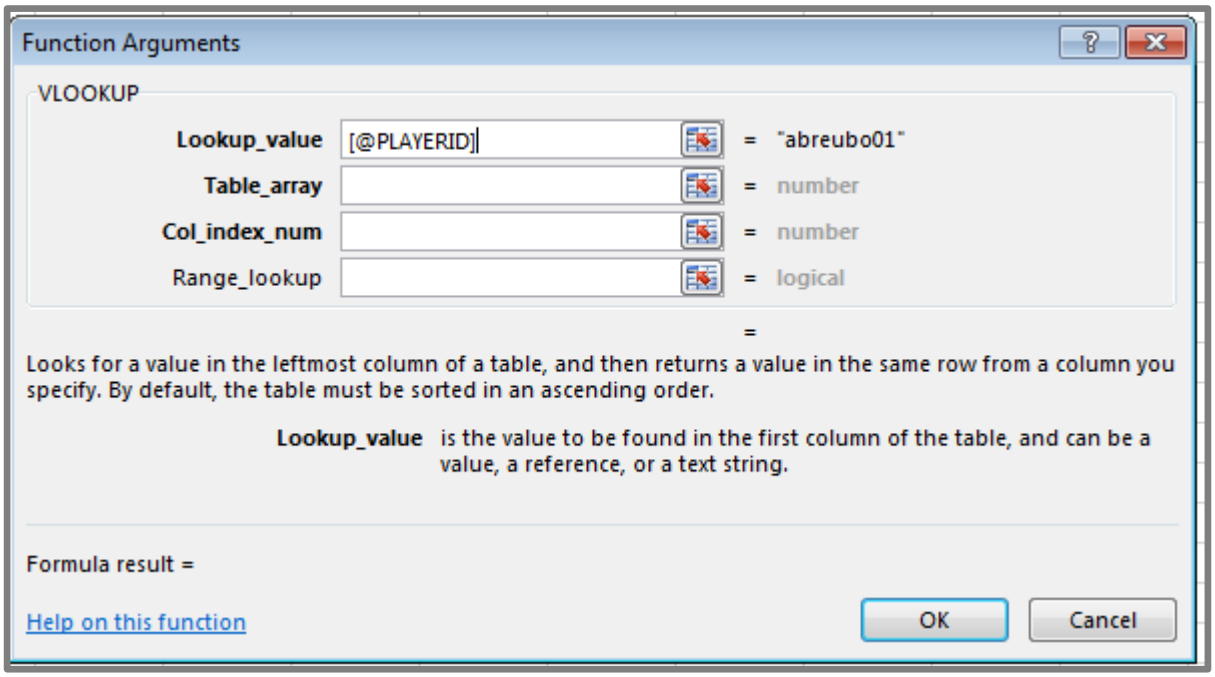
	A	B	C	D	E
1	IDPLAY	PLAYERNAME	BIRTHDAT	FIRSTNA	LASTNAME
4	abreubo01	Bobby Abreu	3/11/1974	Bobby	Abreu
5	abreujo02	Jose Abreu	1/29/1987	Jose	Abreu
6	abreuto01	Tony Abreu	11/13/1984	Tony	Abreu
9	ackledu01	Dustin Ackley	2/26/1988	Dustin	Ackley
10	adamsda0	David Adams	5/15/1987	David	Adams
11	adamsma0	Matt Adams	8/31/1988	Matt	Adams
17	alcanar01	Arismendy Alcantara	10/29/1991	Arismendy	Alcantara
19	almonab01	Abraham Almonte	6/27/1989	Abraham	Almonte
20	almonzo01	Zoilo Almonte	6/10/1989	Zoilo	Almonte
21	alonsyo01	Yonder Alonso	4/8/1987	Yonder	Alonso
22	altuvjo01	Jose Altuve	5/6/1990	Jose	Altuve
25	alvarpe01	Pedro Alvarez	2/6/1987	Pedro	Alvarez

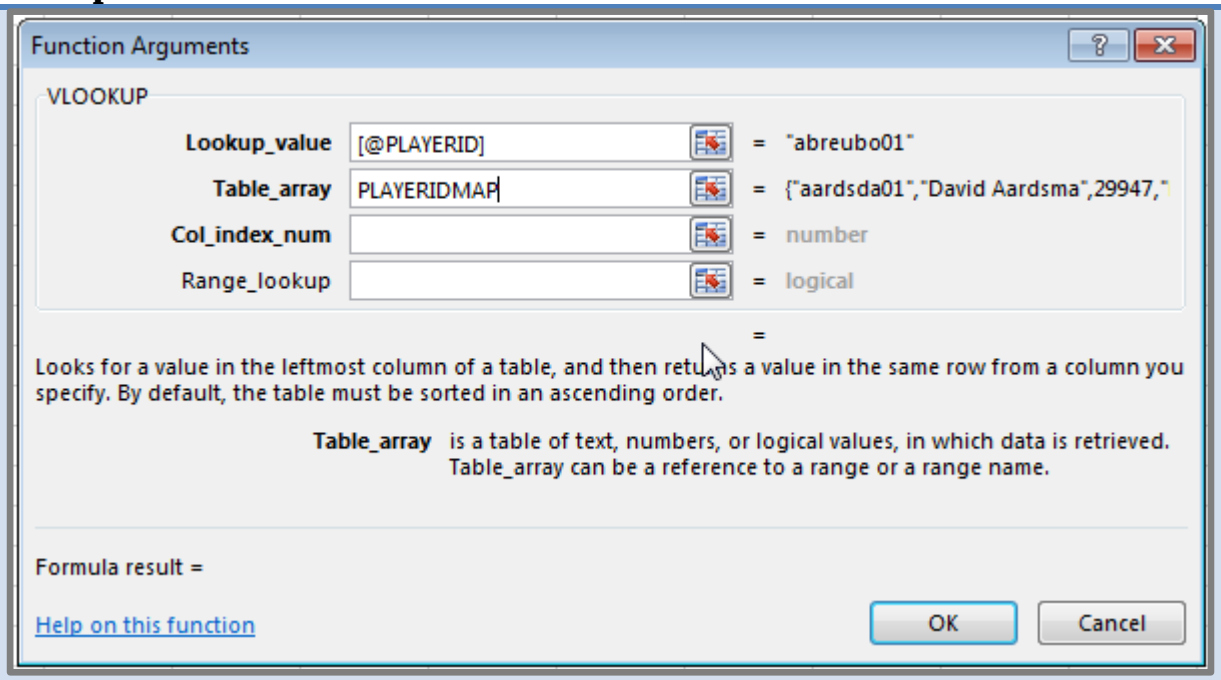
To start building the formula, click in cell B2 of your Hitter Ranks tab. Then click the "fx" button of the formula bar to launch Excel's formula wizard. We'll use the wizard the first time through to better explain this function in Excel.

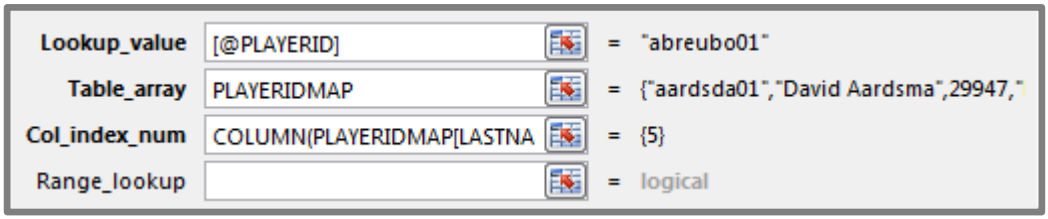
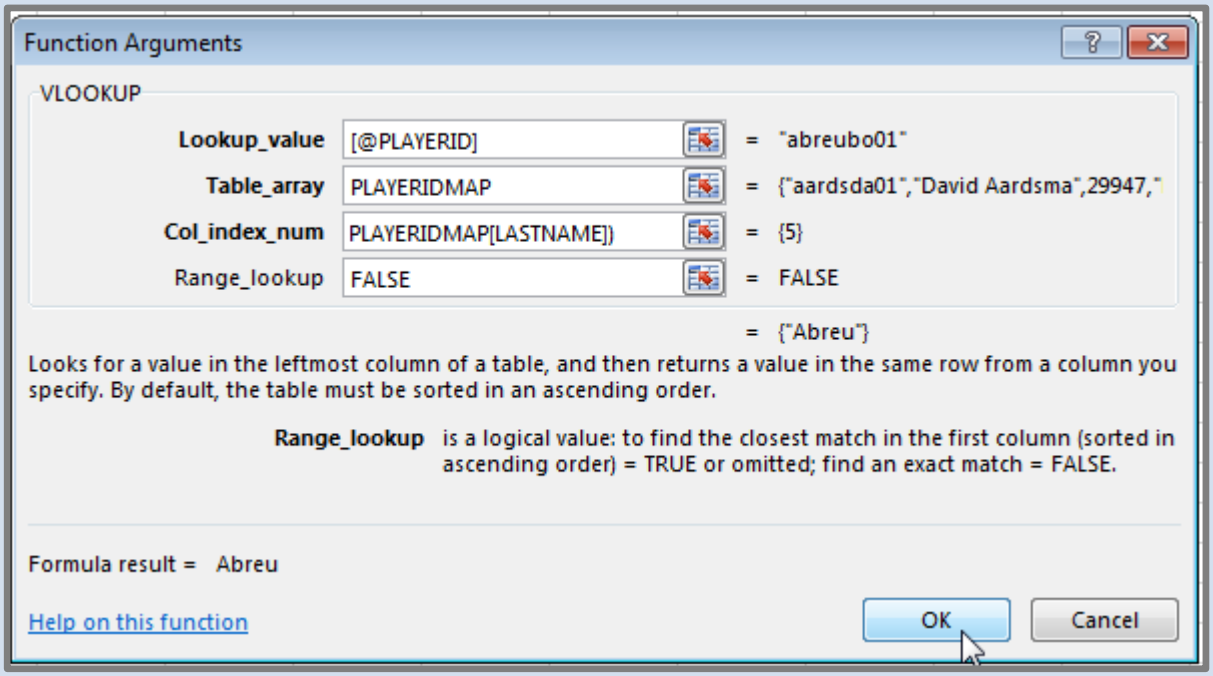


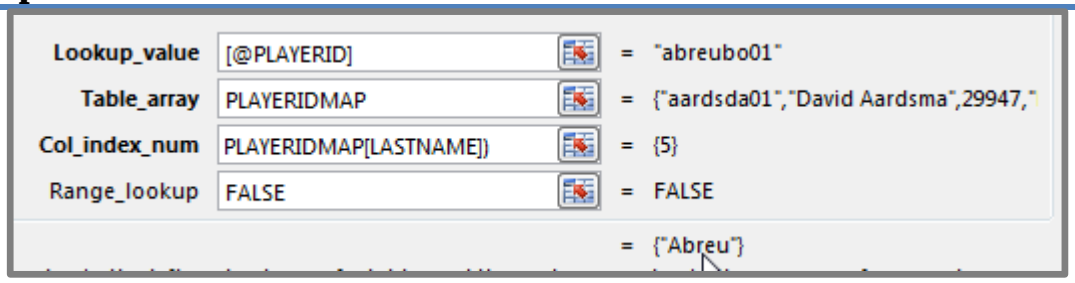
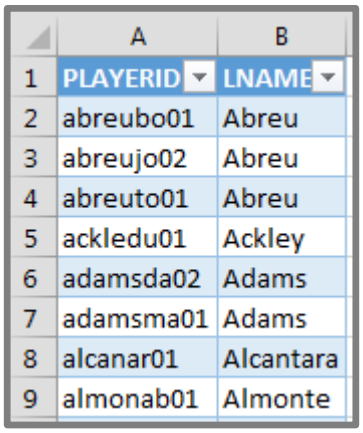
19. Type "vlookup" into the search bar and click "Go". When the function appears, make sure it is selected and hit "OK". You should then see the different arguments, or components, needed for the formula to work.

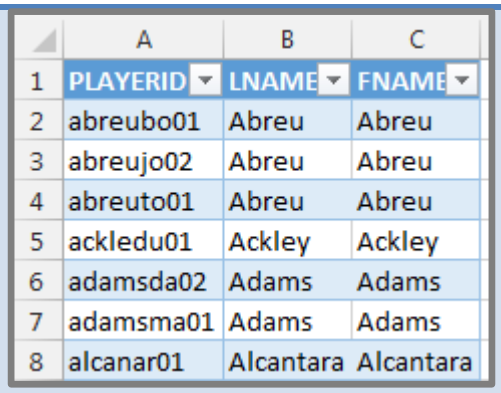
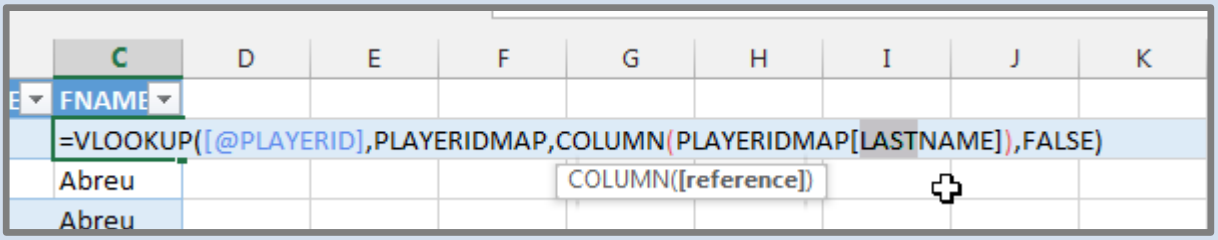


Step	Description
20.	The “Lookup_value” is the value on the “Hitter Ranks” sheet that we want to locate (or match to) in the “PLAYERIDMAP”. Click once in the “Lookup_value” field. Then click on the value in cell A2 (“abreubo01”). Excel will convert this to [@PLAYERID]. This naming convention is referred to as a "Structured Reference" or a "Table Reference" and can be used when you have converted your data into an Excel table. 
21.	The “Table_array” field is the table (or array, or block of data) in which to go look for the matching PLAYERID. Because the PLAYERIDMAP sheet was previously set up as a table, we can take advantage of this. Click once in the “Table_array” field. Simply type “PLAYERIDMAP” (no quotes). Again, this is another benefit of using Excel tables. It’s much easier to type in the table name than it is to flip tabs in Excel and select a giant range of data with your mouse.

Step	Description
	 You'll know you got this right if you see part of the PLAYERIDMAP populating to the right of the Table_array field.
22.	The “Col_index_num” field wants to know the number of the column in the PLAYERID map table to retrieve data from. Again, our goal is to retrieve LASTNAME from the PLAYERIDMAP table, which is column 5 in that table. You could manually flip back and forth between tabs to determine the column number. You could then just type a "5" in for “Col_index_num”. This takes time and can be difficult if you start getting into column X (do you know what number letter of the alphabet that is?). It's also a **BIG** problem if you later add a column that would push LASTNAME into column number 6. For these reasons, I prefer to use the COLUMN formula. When this is entered into the Col_index_num field, it will calculate the location of the LASTNAME column. We don't have to flip back and forth and if LASTNAME gets shifted to another column, this formula will adjust automatically. The formula below will determine that LASTNAME is the fifth column in the PLAYERIDMAP table.

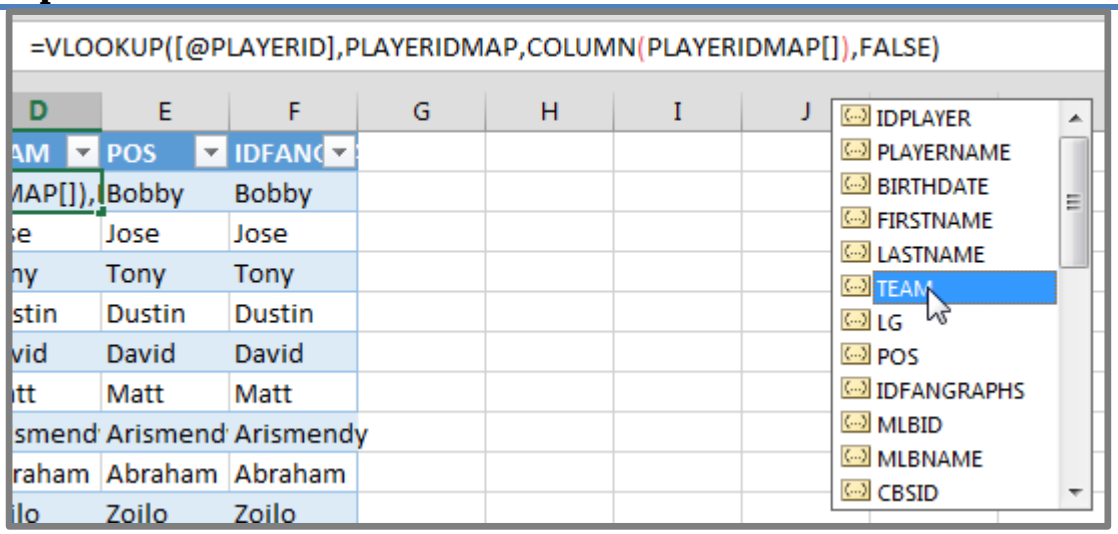
Step	Description
	COLUMN(PLAYERIDMAP[LASTNAME]) Enter this equation into the Col_index_num field. 
23.	Finally, we have the Range_lookup argument. I always enter "FALSE" for this in order to ensure Excel only locates exact matches for a PLAYERID. I don't want Excel to return an approximate match if the exact PLAYERID cannot be found. Giving me Bobby Abreu's projection instead of Jose Abreu's would not be helpful... 
24.	Before hitting "OK" to accept the formula, you can preview the output. In this case we are dealing with "abreubo01", or Bobby Abreu, and can see the formula appears to be working (look at the tip of the mouse pointer below).

Step	Description
	 Click OK to accept the formula. Once the formula is entered, it should automatically copy to the remaining rows of the table.  A B 1 PLAYERID LNAME 2 abreubo01 Abreu 3 abreujo02 Abreu 4 abreuto01 Abreu 5 ackledu01 Ackley 6 adamsda02 Adams 7 adamsma01 Adams 8 alcanar01 Alcantara 9 almonab01 Almonte
25.	We will use the VLOOKUP formula to pull additional data and the majority of the formula will remain the same. To add a FNAME column, type the "FNAME" into cell C1. Copy the formula from cell B2. Don't click and drag it. Actually right-click on B2 to copy it or use the CTRL + C shortcut. Paste the formula into cell C2. When you copy and paste the formula this way you should end up with two columns displaying player last names. That's what you want for now!

Step	Description
	 Then simply double click in cell C2 and change the column name (remember column names are surrounded in [brackets]. So change **[LASTNAME]** to **[FIRSTNAME]**.).  Nerdy Excel talk here, but dragging formulas within tables does not work very well because there's no way to make the formulas absolute (they want to stay relative as you move them). That's why I suggest copying and pasting the formula, even if it duplicates and you then need to change part of it.
26.	Repeat step 25 to pull TEAM, POS, and IDFANGRAPHS from the PLAYERIDMAP tab. If you can't remember the exact name of a column, once you have entered a table name, like PLAYERIDMAP, and the opening "[" bracket, a helpful type ahead box will display all the column names in the PLAYERIDMAP table (see the image below showing the type ahead box). You can use the mouse to double-click on the column name in the type ahead list or select a column name and hit the Tab key to add it to your formula.

SMART FANTASY BASEBALL

Step	Description



The exact formulas you want for TEAM, POS, and IDFANGRAPHS are:

TEAM:

=VLOOKUP([@PLAYERID],PLAYERIDMAP, COLUMN(PLAYERIDMAP[TEAM]),FALSE)

POS:

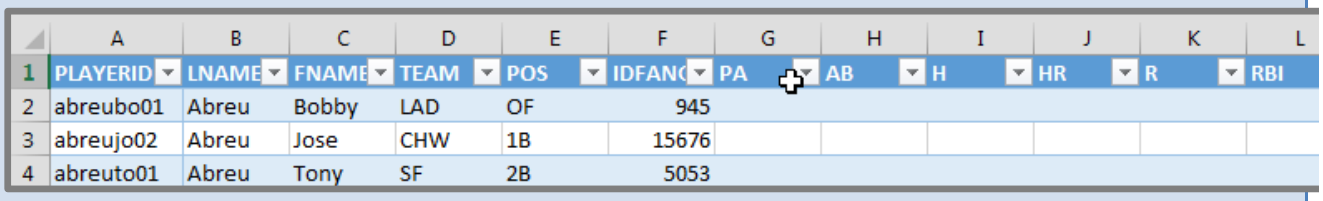
=VLOOKUP([@PLAYERID],PLAYERIDMAP, COLUMN(PLAYERIDMAP[POS]),FALSE)

IDFANGRAPHS:

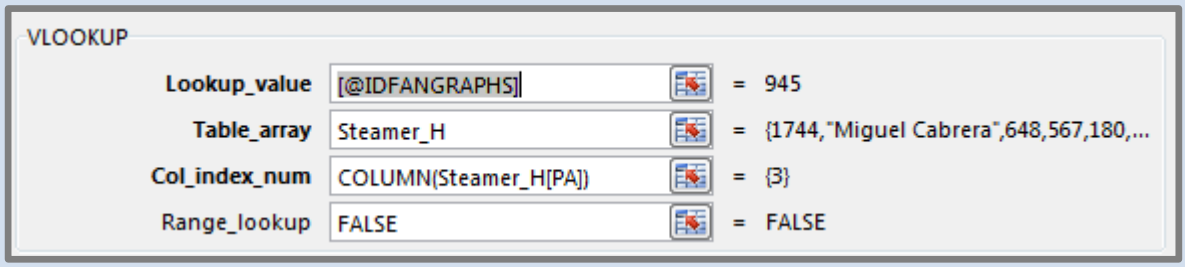
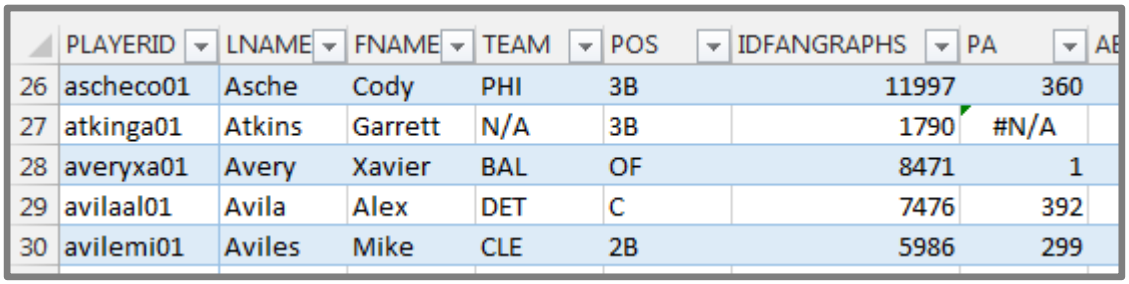
=VLOOKUP([@PLAYERID],PLAYERIDMAP, COLUMN(PLAYERIDMAP[IDFANGRAPHS]),FALSE)

27. We've now pulled all the relevant information from PLAYERIDMAP and can begin pulling in hitter projections from our STEAMER_H table.

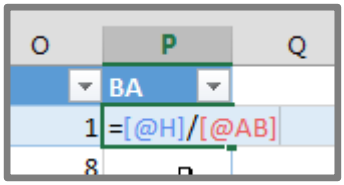
Add column headers for columns where we will pull plate appearances (PA), at bats (AB), hits (H), home runs (HR), runs (R), runs batted in (RBI), walks (BB), strikeouts (SO), stolen bases (SB), and any other counting stat categories used in your league's scoring system (e.g. 2B, 3B, CS, etc.).

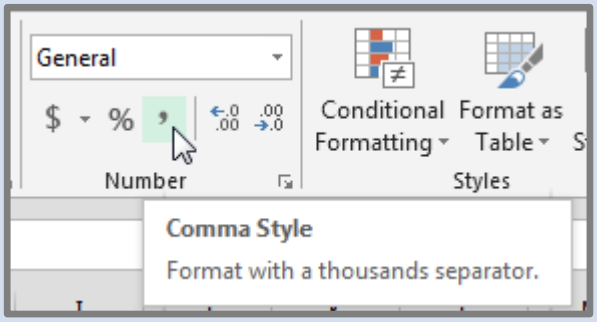


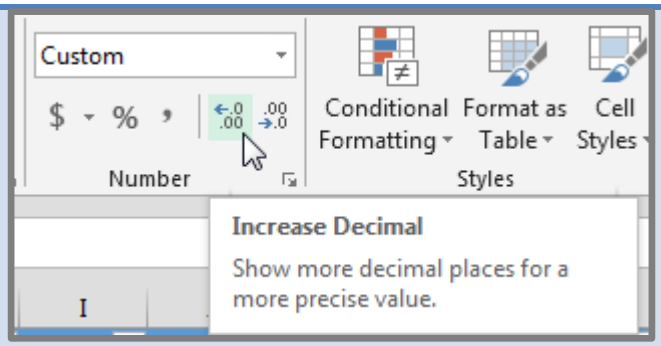
	A	B	C	D	E	F	G	H	I	J	K	L
1	PLAYERID	LNAME	FNAME	TEAM	POS	IDFANG	PA	AB	H	HR	R	RBI
2	abreubo01	Abreu	Bobby	LAD	OF	945						
3	abreujo02	Abreu	Jose	CHW	1B	15676						
4	abreuto01	Abreu	Tony	SF	2B	5053						

Step	Description
	There will be some tweaks to the VLOOKUP formula we used earlier. First, the Steamer projections use Fangraphs ID numbers. So we will be using the IDFANGRAPHS column as the Lookup_value. Second, we must specify to pull from the Steamer Hitters projections (STEAMER_H table name). And finally, the COLUMN formula will change to determine what statistic to pull.  Your final Plate Appearance formula should be: **=VLOOKUP([@IDFANGRAPHS], STEAMER_H, COLUMN(STEAMER_H[PA]), FALSE)**
28.	After you accept the formula above, you may encounter a situation where the VLOOKUP formula will return "#N/A" for certain players. This error means that Excel could not find the value you told it to look up. In this example image below, Garrett Atkin's player ID was not found in the projections (probably because he's retired).  These errors can cause big problems with the rankings. It would be better to have the PA, HR, and RBI for a player to be zero or blank. To accomplish this, we can use the "IFERROR" formula and wrap it around our original VLOOKUP formula. This is the original formula in the cell:

Step	Description
	=VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[PA]),FALSE) Now surround the VLOOKUP formula with the IFERROR formula. The original VLOOKUP formula will remain exactly as is. I will just put "IFERROR(" in front of it. And behind the existing formula I will put ",0)". **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[PA]),FALSE),0)** You can see the edits I made in the red bolded font. That's all you have to do. Excel will now perform the exact same calculation as before, but if a player cannot be located in the VLOOKUP, Excel will put 0 instead of #N/A. I recommend using a 0, but if you want it to be a blank instead of a zero, use this: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[PA]),FALSE),"")**
29.	The formulas for AB, H, 2B, 3B, HR, R, RBI, BB, SO, and SB are shown below. AB: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[AB]),FALSE),0)** H: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[H]),FALSE),0)** 2B: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[2B]),FALSE),0)** 3B: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[3B]),FALSE),0)** HR:

Step	Description
	=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[HR]),FALSE),0) R: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[R]),FALSE),0)** RBI: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[RBI]),FALSE),0)** BB: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[BB]),FALSE),0)** SO: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[SO]),FALSE),0)** SB: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_H, COLUMN(STEAMER_H[SB]),FALSE),0)**
30.	I don't pull batting average or any other rate statistics (OBP, SLG, etc.) directly from the projections. I prefer to recalculate them with a formula after the underlying statistics have been pulled. To do this, type "BA" in as a column header. Then enter the formula to calculate batting average (**=[@H]/[@AB]**).  If you're not exactly sure of the convention for the formulas you can always use your mouse to click on the values in the "H" and "AB" columns and Excel will translate it into the =[@H]/[@AB] format for you.

Step	Description
	Repeat this step for any other rate statistics you desire (OBP, SLG, OPS, etc.). You might notice that these rate formulas can also result in errors if a player does not have a projection (dividing by 0 causes an error). You can use the IFERROR formula around the calculation to clean this up. Here are the formulas I use for AVG, OBP, and SLG: AVG: **=IFERROR([@H]/[@AB],0)** OBP: **=IFERROR(([@H]+[@BB]+[@HBP])/([@AB]+[@BB]+[@HBP]),0)** SLG: **=IFERROR(([@H]+[@2B]+2*[@3B]+3*[@HR])/[@AB],0)**
31.	Most statistics don't need formatting, but AVG and the other rate statistics will. In my file, AVG is located in column "S". Click on the "S" column label (or whatever column AVG is in) to select the entire AVG column. Then on the Home tab of the ribbon, click on the comma number format.  Finally, click on the symbol to increase the decimal places from two to three (the standard batting average format).

Step	Description
	
32.	Save the file. You've now successfully combined hitter information and projected hitting stats into one table.

WRAP UP

At this point we have pulled the hitter projections into our rankings tab that we will eventually calculate each player's projected points on.

In the next part of the book we will follow these exact same steps with pitchers in order to develop our pitcher rankings worksheet.

DO YOU HAVE ANY QUESTIONS?

Do you have questions about Part 3? Or want to see what others have asked? Check here.

EXAMPLE EXCEL FILE

Download the example spreadsheet illustrating the work done in this part here. Or you can download all spreadsheets for the entire book here.

PART 4 – PITCHER RANKINGS

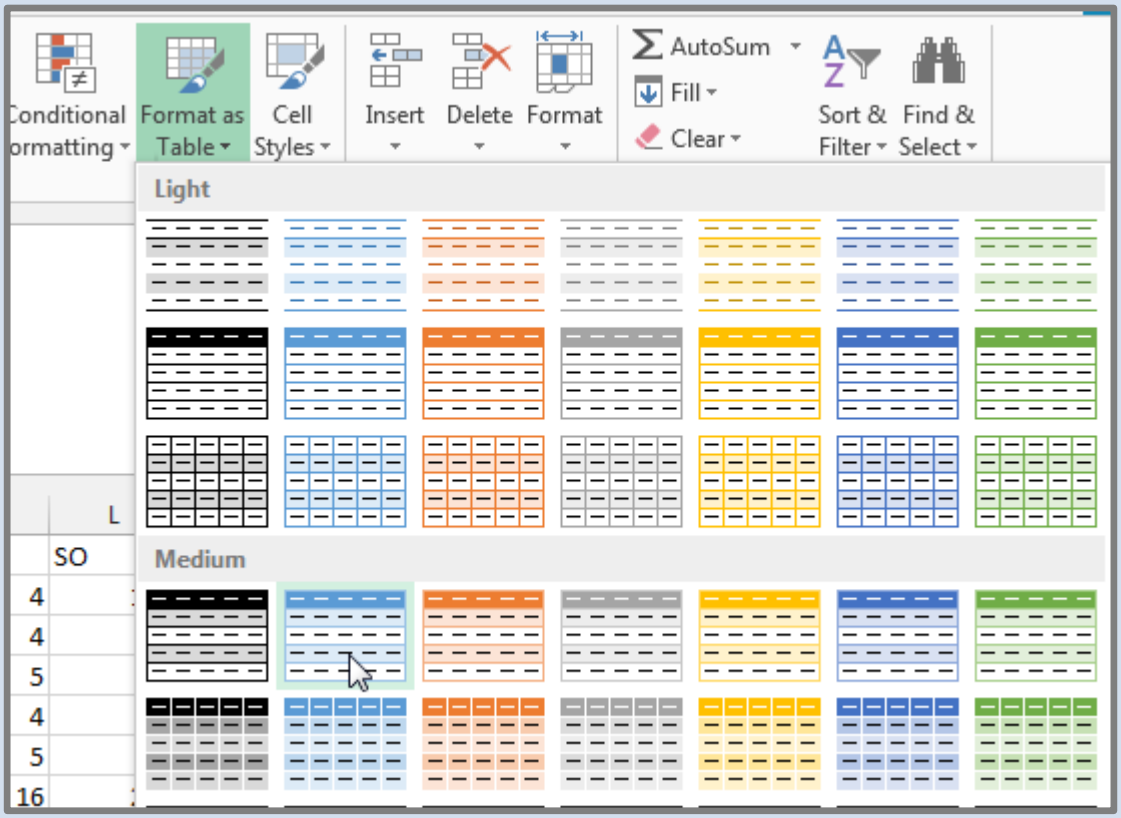
INTRODUCTION

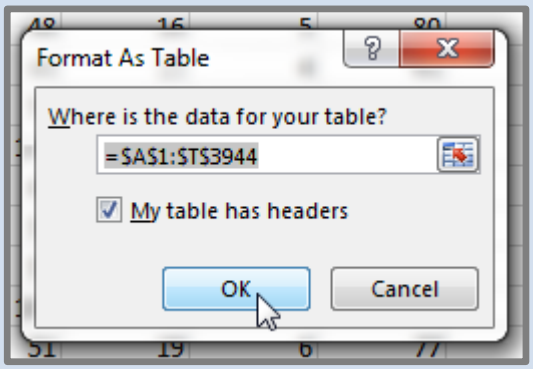
In this part of the book we will again use Excel's VLOOKUP and IFERROR formulas as well as Table and Structured Reference features, but this time to pull pitcher information and projections to create our pitcher rankings tab.

EXCEL FUNCTIONS AND FORMULAS IN THIS PART

This is where I normally give detailed explanations of each Excel feature and formula used in the instructions below; however, we're not introducing anything new in Part 4. If you would like more background on the features and formulas used below, please refer to Part 3 or ask questions in the comments area mentioned below.

STEP-BY-STEP INSTRUCTIONS

Step	Description
1.	Go to the "Steamer Pitchers" tab of your Excel file. We will convert this to a "table" in Excel in order to make the data easier to work with. Click anywhere within the pitcher projection data. Then locate the "Home" tab in the Excel menu system ("the ribbon"). Click once on the "Format as Table" drop down, and then select your desired color scheme. 

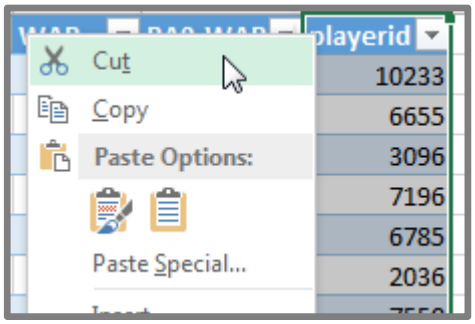
Step	Description
	You will then be prompted to verify the range of cells in the table and that your table has a header row (e.g. Name, W, L, ERA, etc.). You might notice that my example projection data goes out to column T. Yours may have more or less columns. I believe the Steamer downloads contain additional information at certain times of the year, but if you look closely at the information in the rightmost columns, they're things we don't care about for fantasy (WAR calculations, etc.). As long as you have the main pitching categories needed for your league's scoring system and the "PLAYERID" column, you're good.  Check “My table has headers”. Click OK. After accepting this, your bland looking data will transform into a nicely formatted table.

Step	Description

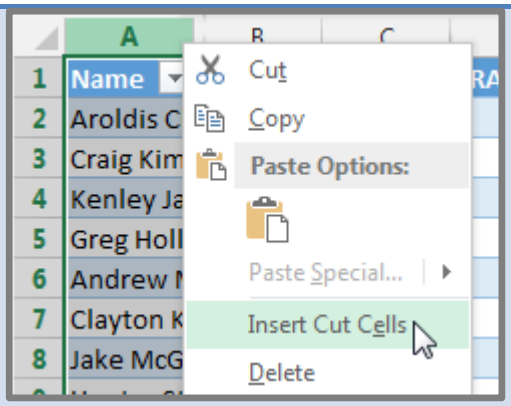
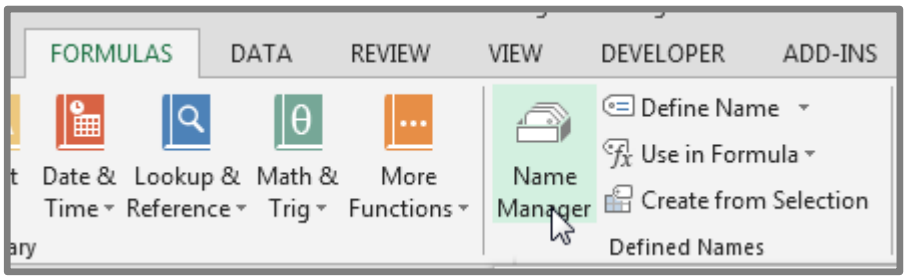
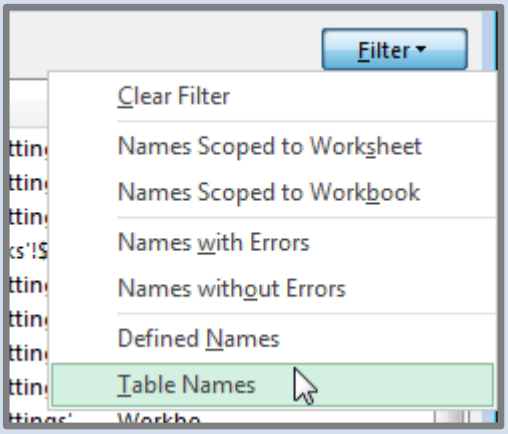
	A	B	C	D	E	F	G	H
1	Name	W	L	ERA	GS	G	SV	IP
2	Aroldis Ch	4	2	1.43	0	65	28	65
3	Craig Kimb	4	2	1.91	0	65	28	65
4	Kenley Jar	4	2	2.04	0	65	28	65
5	Greg Holla	4	2	2.24	0	65	28	65
6	Andrew M	4	2	2.38	0	65	6	65
7	Clayton Ke	15	8	2.46	32	32	0	201
8	Jake McGe	4	2	2.23	0	65	28	65
9	Hunter Str	3	2	2.48	0	55	2	55
10	Mark Mela	4	3	2.61	0	65	28	65
11	Felix Hern	14	8	2.93	30	30	0	192
12	Brad Boxb	4	3	2.47	0	65	6	65
13	David Rob	4	3	2.82	0	65	28	65
14	Wade Dav	4	3	2.48	0	65	6	65
15	Jose Ferna	9	6	2.93	20	20	0	125
16	Joaquin B	4	3	2.57	0	65	28	65
17	Carter Cap	2	2	2.82	0	35	0	35
18	Koji Uehar	4	2	2.34	0	65	28	65
19	Stephen S	13	8	3.03	29	29	0	182

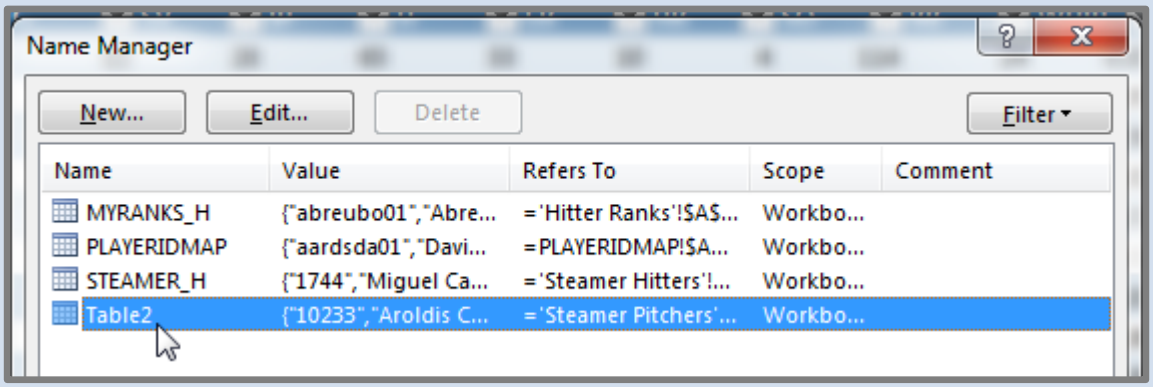
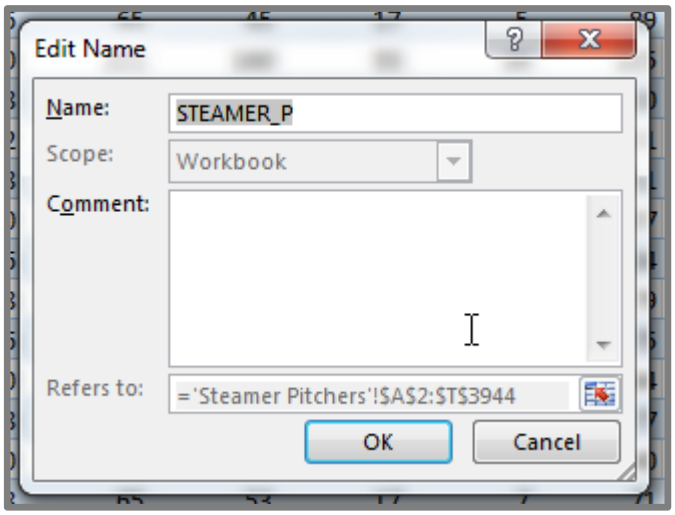
2. We'll later be pulling information from this table into other worksheets. To make the pulling of data easier we need to move the Fangraphs player ID to be the first column (you can use VLOOKUP if the player ID is in the first column, otherwise you're stuck using more difficult and/or multiple formulas).

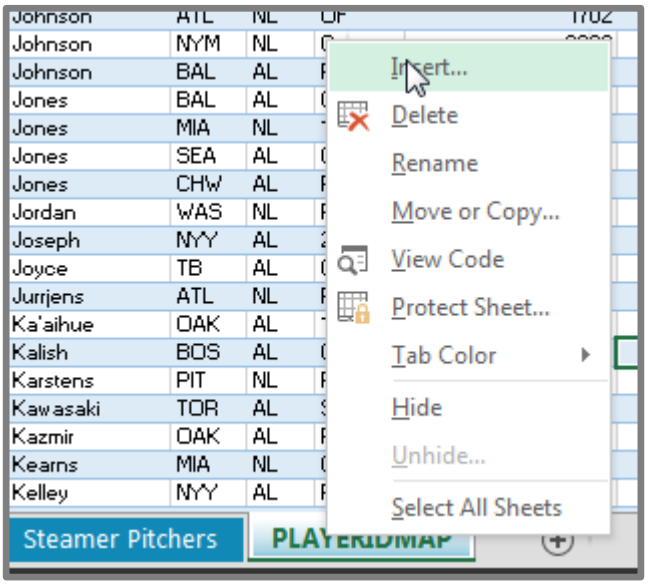
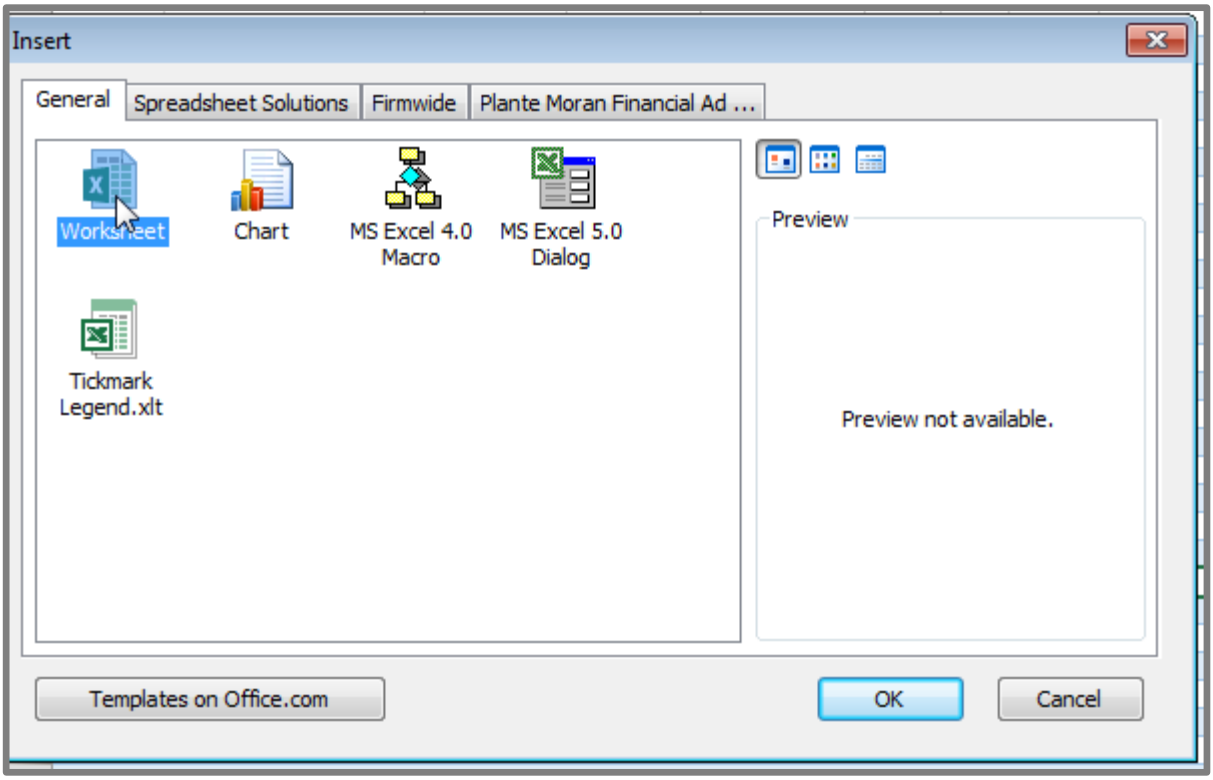
Right-click on the top of the Fangraphs player ID column (I right-clicked on the "T" column header) and cut it.

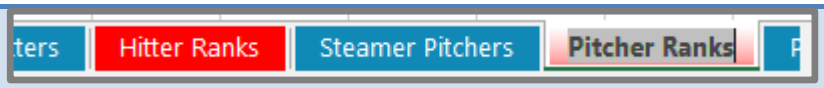
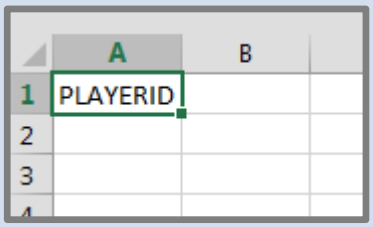


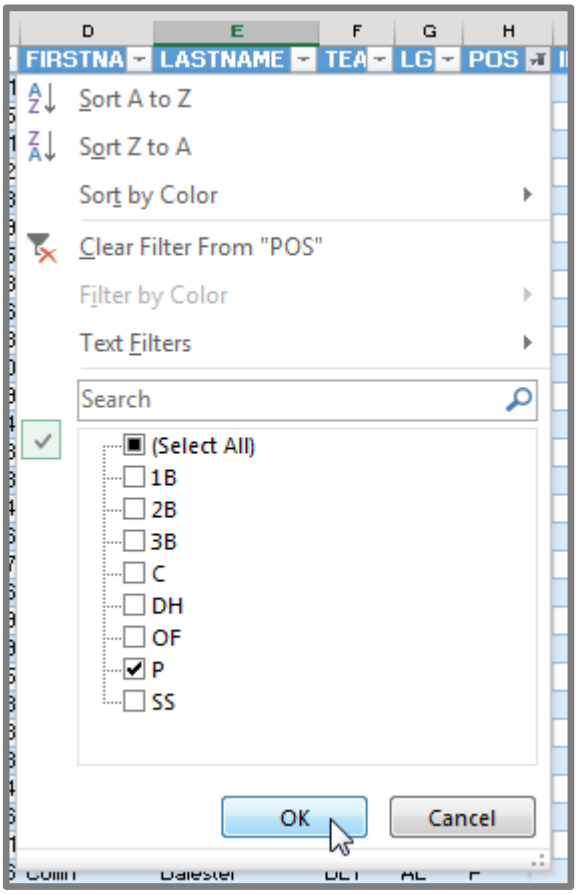
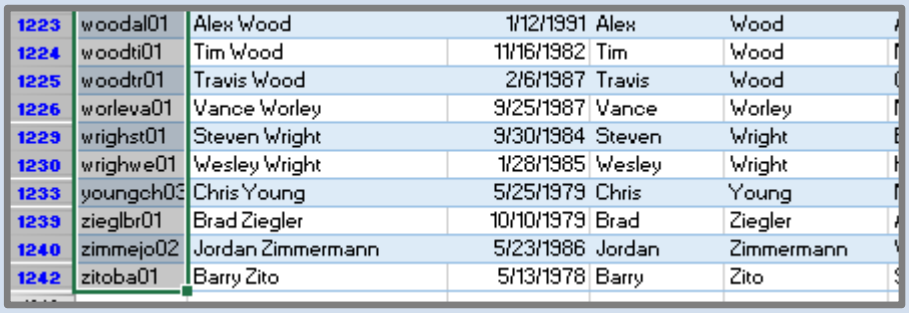
3. Now right-click on the top of the player name column (column header "A") and select "Insert Cut Cells".

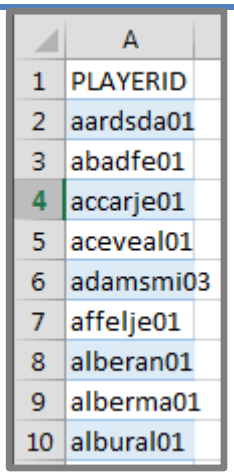
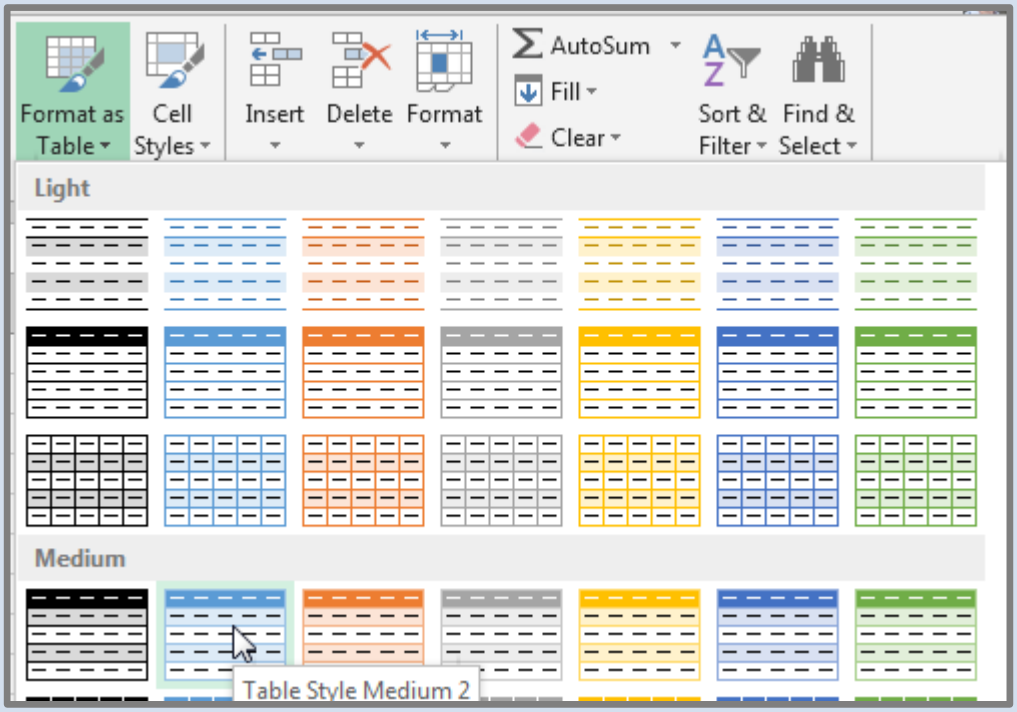
Step	Description
	
4.	Before we finalize this table, we should give it a name we can refer to in the future. Go to the “Formulas” tab on the Excel ribbon and click on the “Name Manager” button. 
5.	Because we created named cells in Part 2 of the book, it can be difficult to locate the tables in the Name Manager. I find it helpful to filter the Name Manager to only show table names. Do this by clicking the "Filter" drop down menu in the top right of the window. Then choose "Table Names". 

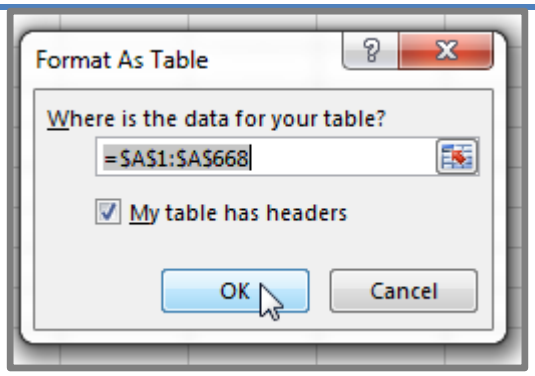
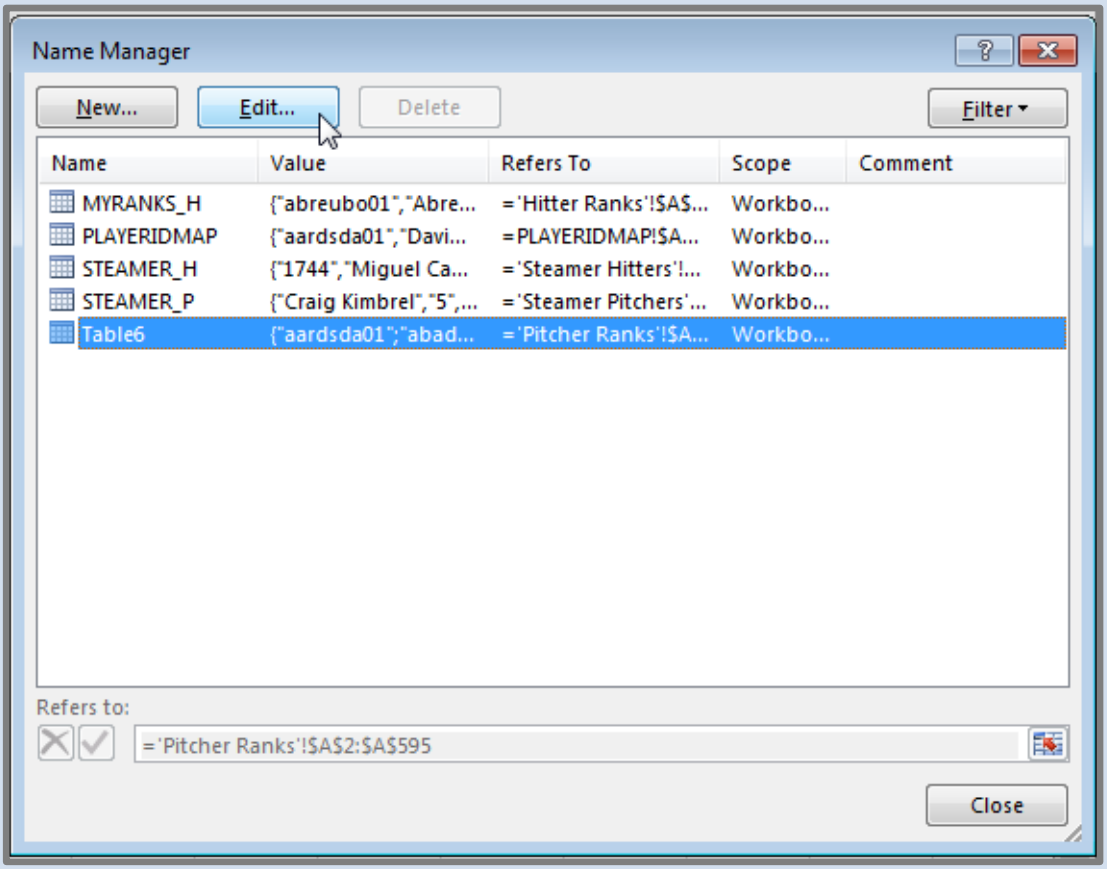
Step	Description
	Excel will give very generic names to a table, like “Table2”. It’s more helpful to give meaningful names to your tables. As you get more tables in a spreadsheet, it can become very difficult to remember the difference between “Table2” and “Table3”. Select your table from the list (it should be the only one named "Table#") and click on the "Edit..." button. 
6.	Give the table a meaningful name. I chose “STEAMER_P” to indicate these are the Steamer Pitcher projections.  Click “OK” to close the “Edit Name” menu. Then click “Close” to exit the “Name Manager”.
7.	We now have the PLAYERIDMAP and STEAMER_P tables in a format where we can pull information from them. I’m going to pull from these two tables into a new tab where I’ll calculate the pitcher rankings.

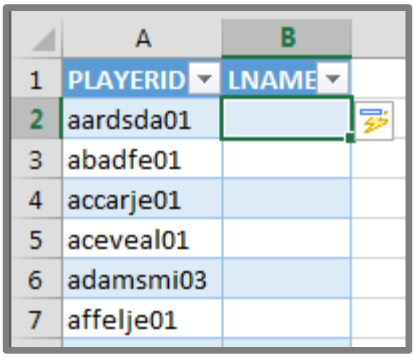
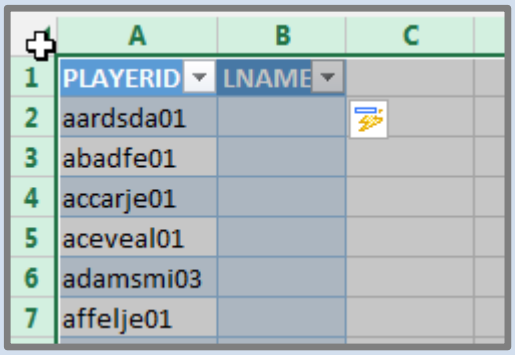
Step	Description
8.	Right click on the “PLAYERIDMAP” tab and select the option to “Insert...”.  Choose the “Worksheet” option and click “OK”. 
9.	Right click on the new sheet tab and choose to “Rename”. I’ll call this sheet “Pitcher Ranks”.

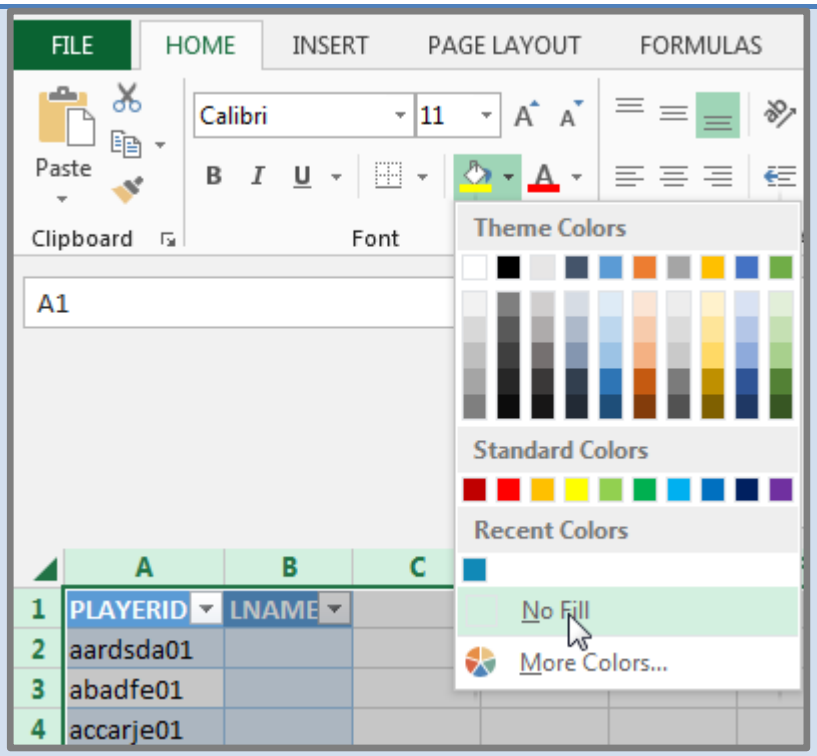
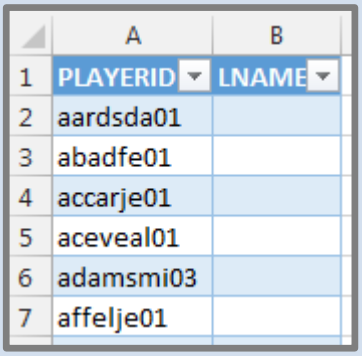
Step	Description
	 After you've renamed the sheet, type "PLAYERID" into cell A1. This will be a column header for our next step. 
10.	As we have talked about before, I like to use Baseball-Reference player IDs as the main ID system in my spreadsheets. This is so I can look at an ID and know who the player is (e.g. kershcl01 is Clayton Kershaw). To make it the main ID we want the first column of this new sheet to contain the Baseball Reference player ID and we only want pitchers at this time. The PLAYERIDMAP sheet has a list of all fantasy-relevant players (for standard rotisserie leagues, at least) and their Baseball Reference IDs. However, this sheet contains hitters also. Just like in the last chapter, we now want to filter out those hitters. Click on the drop down arrow on the “POS” column. You’ll be presented with a list of all the positions. Check the "(Select All)" box until all the positions below become unchecked. Then check the "P" box.

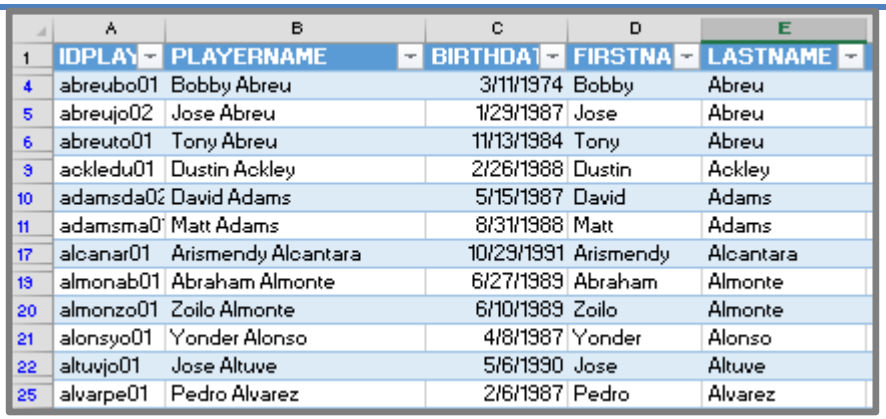
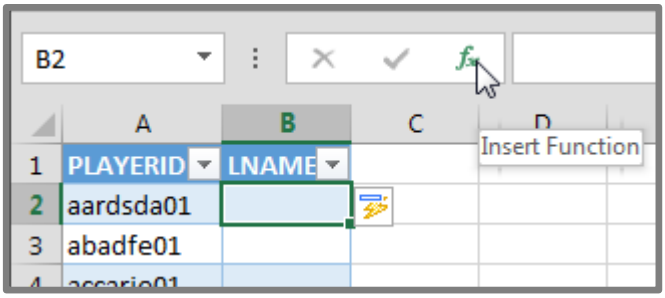
Step	Description
	Click OK to apply the filter.  The Player ID Map will now list only pitchers.
11.	Starting at the first player and ending with the last, click and drag within the "IDPLAYER" column (first column) and select all player (or select the first player and then use the keyboard shortcut SHIFT + CTRL + Down Arrow). Only select from this first column.  1223 woodal01 Alex Wood 1/12/1991 Alex Wood 1224 woodti01 Tim Wood 11/16/1982 Tim Wood 1225 woodtr01 Travis Wood 2/6/1987 Travis Wood 1226 worleva01 Vance Worley 9/25/1987 Vance Worley 1229 wrighst01 Steven Wright 9/30/1984 Steven Wright 1230 wrighwe01 Wesley Wright 1/28/1985 Wesley Wright 1233 youngch03 Chris Young 5/25/1979 Chris Young 1239 zieglbr01 Brad Ziegler 10/10/1979 Brad Ziegler 1240 zimmejo02 Jordan Zimmermann 5/23/1986 Jordan Zimmermann 1242 zitoba01 Barry Zito 5/13/1978 Barry Zito
12.	Copy this selected data. Return to the "Pitcher Ranks" sheet. Then paste the data into cell A2.

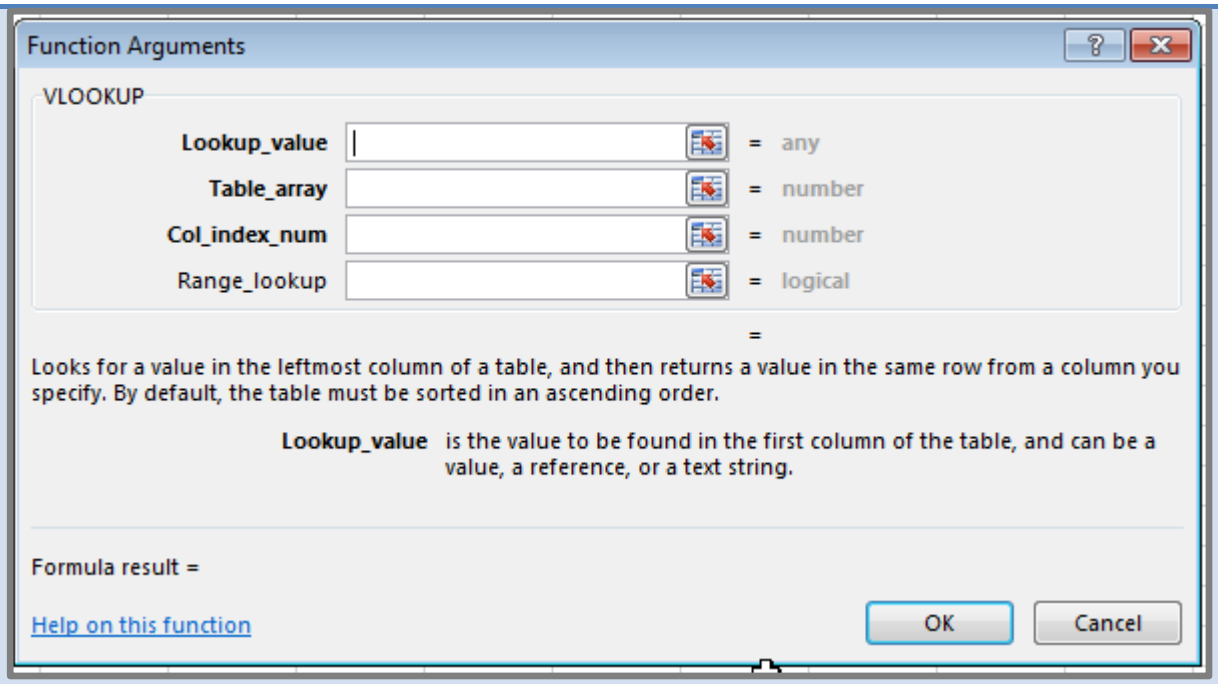
Step	Description
	
13.	Now that we're starting this new sheet, we should convert it to an Excel table. We will essentially repeat step 1 above, but for this new worksheet. Click once to select any player ID. Then locate the "Home" tab in the Excel menu system ("the ribbon"). Click once on the "Format as Table" drop down, and then select your desired color scheme. 
14.	You will then be prompted to verify the range of cells in the table and that your table has a header row.

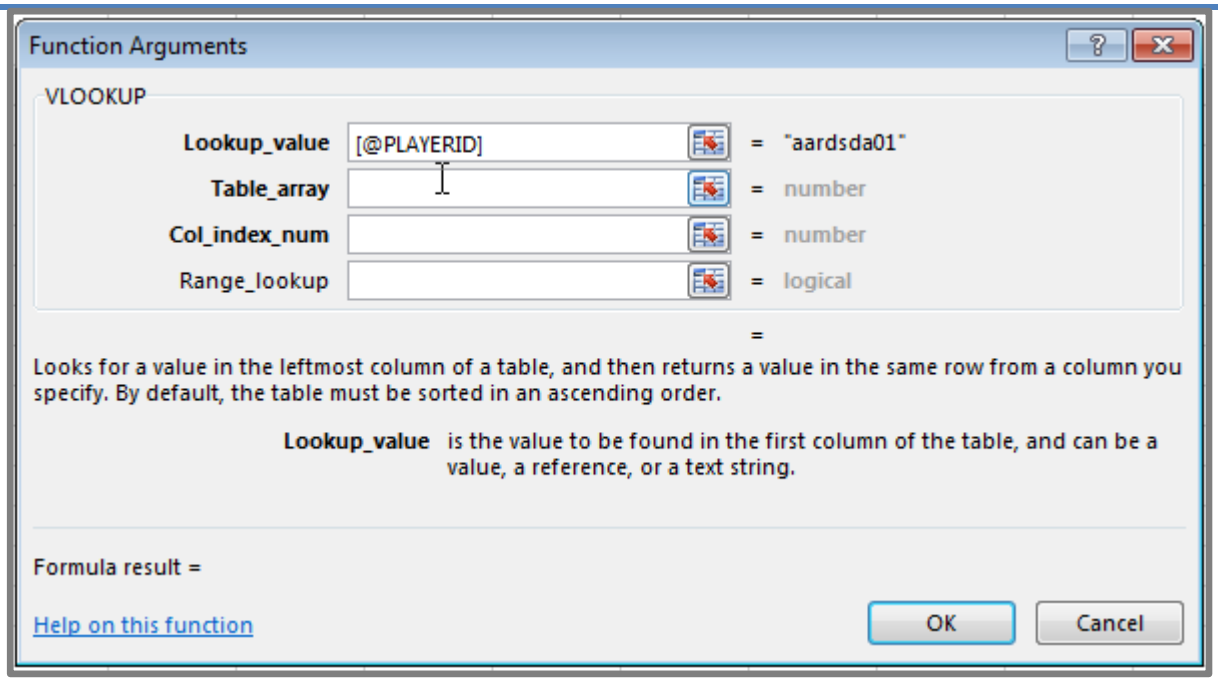
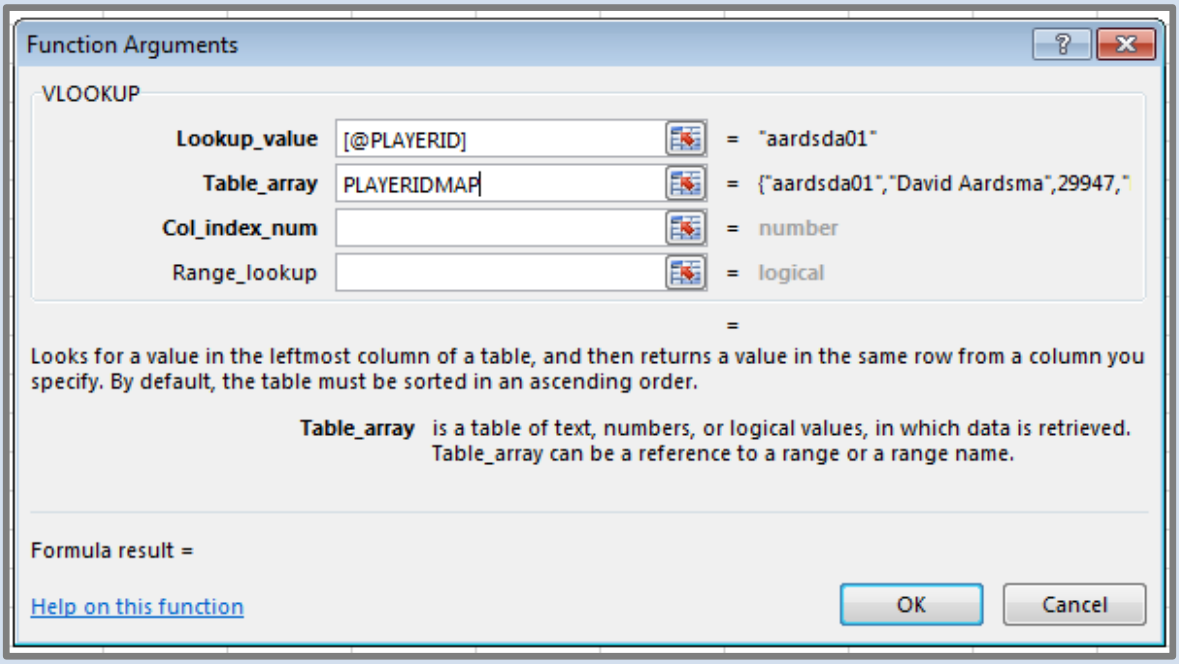
Step	Description
	 Check “My table has headers”. Click OK.
15.	Repeat steps 4-6 in order to give the table a more meaningful name. In my example, Excel defaulted the table name to “Table6”. I renamed mine to be “MYRANKS_P” (to indicate pitcher ranks, because we already ranked hitters). 

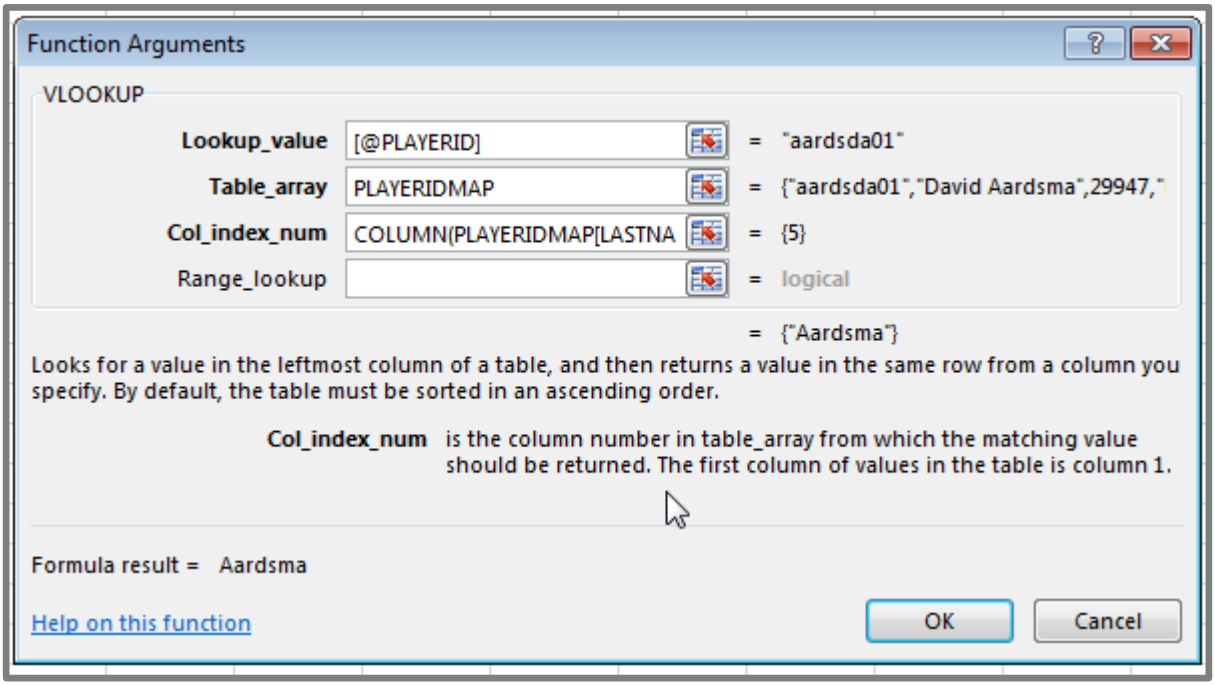
Step	Description
16.	Now let's begin pulling data from the other tabs. I'll first add "Player Last Name" to the table. To expand your table, simply type into column B and hit Enter (I typed into cell B1). Excel should automatically pull this new column into your table. I'm going to name my column "LNAME". 
17.	Your table shading may look like this instead of the image from step 16: If so, click once in the area between the Column "A" header and the Row "1" header (the top left corner of all cells), to select all cells in the entire sheet.  Then click the "Fill Color" icon (looks like a paint can) drop down arrow and choose the "No Fill" option.

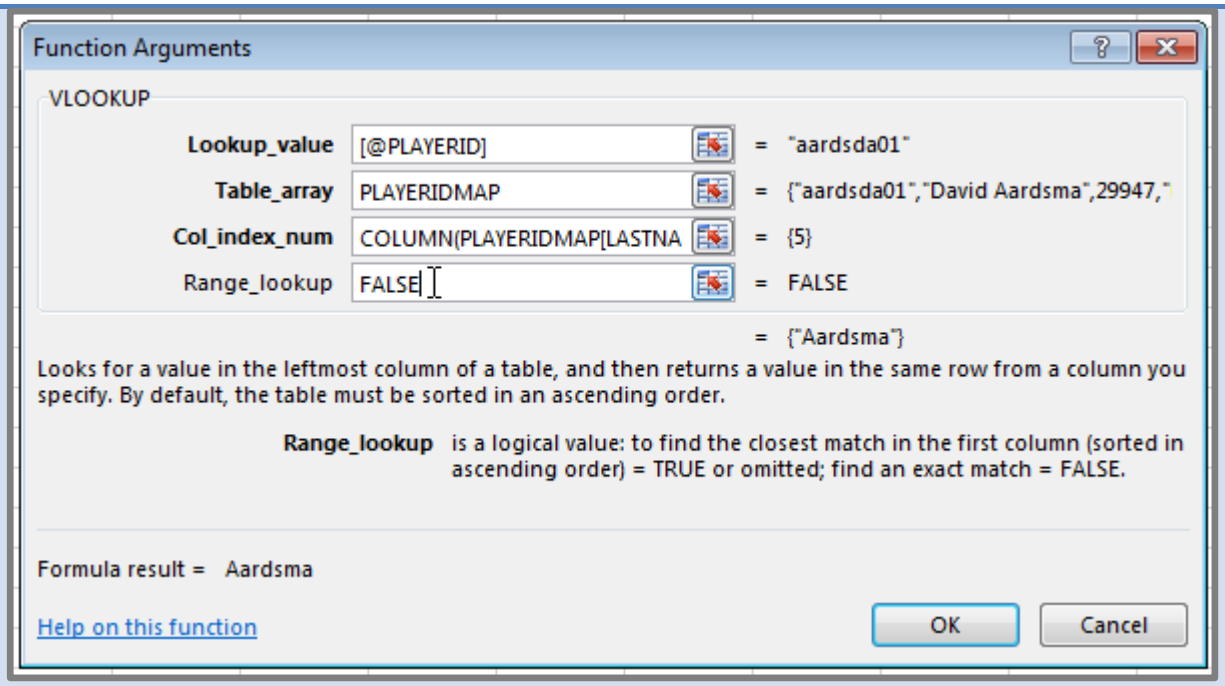
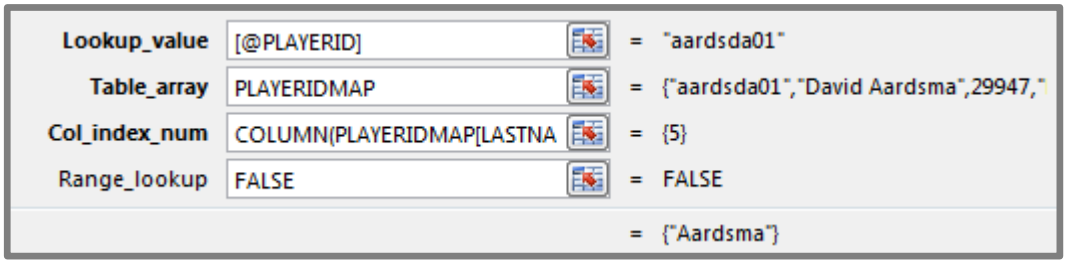
Step	Description
	 You should now see the proper alternating color scheme. 
18.	Our goal in column B is to instruct Excel to take the PLAYERID from column A, go into the first column of PLAYERIDMAP, find the matching PLAYERID, and then pull the corresponding LASTNAME. You can see in the image of the PLAYERIDMAP below that LASTNAME is in the fifth column (column E).

Step	Description
	 To start building the formula, click in cell B2 of your Pitcher Ranks tab. Then click the “fx” button of the formula bar to launch Excel’s formula wizard. We’ll use the wizard the first time through to better explain this function in Excel. 
19.	Type “vlookup” into the search bar and click “Go”. When the function appears, make sure it is selected and hit “OK”. You should then see the different arguments, or components, needed for the formula to work.

Step	Description
	
20.	The “Lookup_value” is the value on the “Pitcher Ranks” sheet that we want to locate (or match to) in the “PLAYERIDMAP”. Click once in the “Lookup_value” field. Then click on the value in cell A2 (“aardsda01”). Excel will convert this to [@PLAYERID]. As we talked about in Part 3, this naming convention is referred to as a "Structured Reference" or a "Table Reference" and can be used when you have converted your data into an Excel table.

Step	Description
	
21.	The "Table_array" field is the table (or array, or block of data) in which to go look for the matching PLAYERID. Because the PLAYERIDMAP sheet was previously set up as a table, we can take advantage of this. Click once in the "Table_array" field. Simply type "PLAYERIDMAP" (no quotes). 

Step	Description
	You'll know you got this right if you see part of the PLAYERIDMAP populating to the right of the Table_array field.
22.	The "Col_index_num" field wants to know the number of the column in the PLAYERID map table to retrieve data from. For the reasons we discussed in the last section, I prefer to use the COLUMN formula. When this is entered into the Col_index_num field, it will calculate the location of the LASTNAME column. The formula below will determine that LASTNAME is the fifth column in the PLAYERIDMAP table. **COLUMN(PLAYERIDMAP[LASTNAME])** Enter this equation into the Col_index_num field. 
23.	Finally, we have the Range_lookup argument. I always enter "FALSE" for this in order to ensure Excel only locates exact matches for a PLAYERID. I don't want Excel to return an approximate match if the exact PLAYERID cannot be found.

Step	Description
	
24.	Before hitting "OK" to accept the formula, you can preview the output. In this case we are dealing with "aardsda01", or David Aardsma (fantasy stud, right?), and can see the formula appears to be working (you can see the end result of this formula is {"Aardsma"}.  Click OK to accept the formula. Once the formula is entered, it should automatically copy to the remaining rows of the table.

Step	Description

	A	B
1	PLAYERID	LNAME
2	aardsda01	Aardsma
3	abadfe01	Abad
4	accarje01	Accardo
5	aceveal01	Aceves
6	adamsmi03	Adams
7	affelje01	Affeldt
8	alberan01	Albers
9	alberma01	Albers
10	albural01	Alburquerque
11	allenco01	Allen

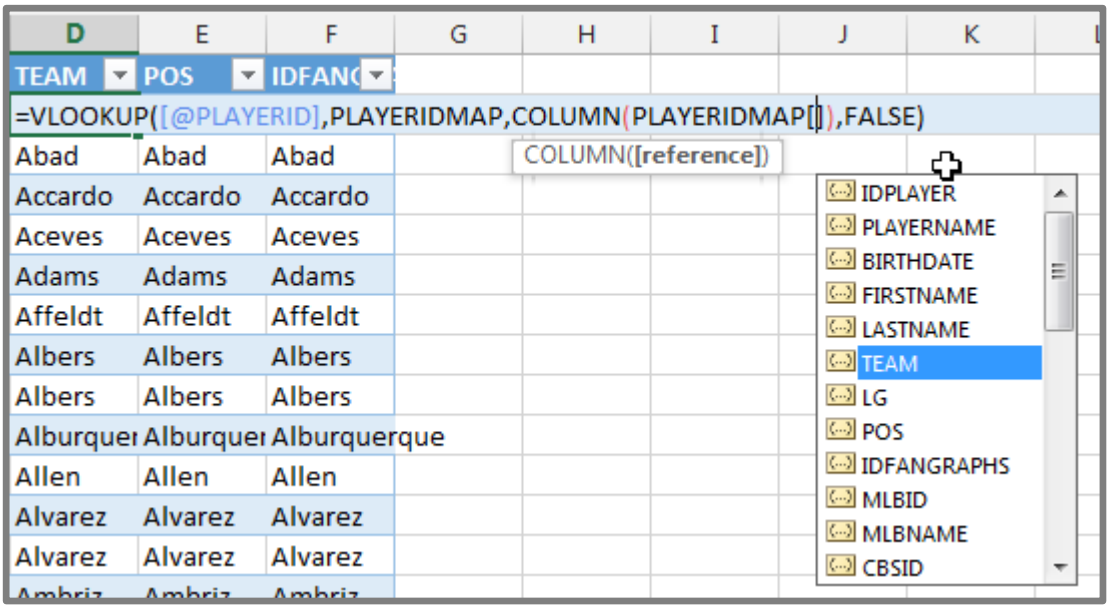
25. We will use the VLOOKUP formula to pull additional data, and the majority of the formula will remain the same. To add a FNAME column, type the "FNAME" into cell C1. Copy the formula from cell B2.

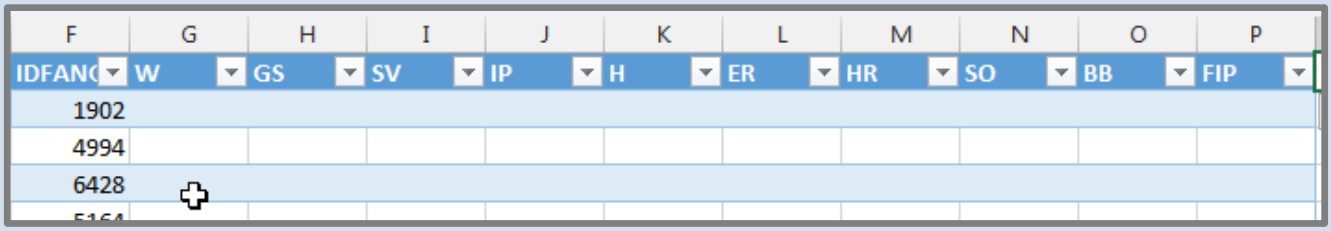
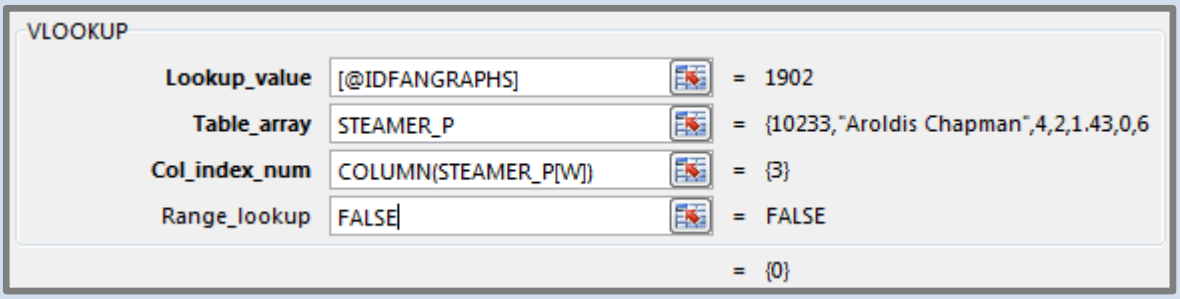
Don't click and drag it. Actually right-click on B2 to copy it or use the CTRL + C shortcut. Paste the formula into cell C2. When you copy and paste the formula this way you should end up with two columns displaying player last names. That's what you want for now!

	A	B	C
1	PLAYERID	LNAME	FNAME
2	aardsda01	Aardsma	Aardsma
3	abadfe01	Abad	Abad
4	accarje01	Accardo	Accardo
5	aceveal01	Aceves	Aceves
6	adamsmi03	Adams	Adams

Then simply double click in cell C2 and change the column name (remember column names are surrounded in [brackets]. So change **[LASTNAME]** to **[FIRSTNAME]**.).

C	D	E	F	G	H	I	J	K
FNAME								
=VLOOKUP([@PLAYERID],PLAYERIDMAP,COLUMN(PLAYERIDMAP[LASTNAME]),FALSE)								
Abad				COLUMN([reference])				
Accardo								
Aceves								

Step	Description
26.	Repeat step 25 to pull TEAM, POS, and IDFANGRAPHS from the PLAYERIDMAP tab. Remember you can use the type ahead list to select a column name. Hit the Tab key to add it to your formula.  The exact formulas you want are: TEAM: **=VLOOKUP([@PLAYERID],PLAYERIDMAP, COLUMN(PLAYERIDMAP[TEAM]),FALSE)** POS: **=VLOOKUP([@PLAYERID],PLAYERIDMAP, COLUMN(PLAYERIDMAP[POS]),FALSE)** IDFANGRAPHS: **=VLOOKUP([@PLAYERID],PLAYERIDMAP, COLUMN(PLAYERIDMAP[IDFANGRAPHS]),FALSE)**
27.	We've now pulled all the relevant information from the PLAYERIDMAP and can now begin pulling in pitcher projections from our STEAMER_P table.

Step	Description
	Add column headers for where we can pull wins (W), games started (GS), saves (SV), innings pitched (IP), hits (H), earned runs (ER), home runs (HR), strikeouts (SO), walks (BB), fielding independent pitching (FIP), and any other counting stat categories used in your league's scoring system (e.g. L).  There will be some tweaks to the VLOOKUP formula we used earlier. First, the Steamer projections use Fangraphs ID numbers. So we will be using the IDFANGRAPHS column as the Lookup_value. Second, we must specify to pull from the Steamer Pitchers projections (STEAMER_P table name). And finally, the COLUMN formula will change to determine what statistic to pull  Your final Wins formula should be: **=VLOOKUP([@IDFANGRAPHS], STEAMER_P, COLUMN(STEAMER_P[W]), FALSE)**
28.	After you accept the formula above, you may encounter a situation where the VLOOKUP formula will return "#N/A" for certain players. This error means that Excel could not find the value you told it to look up. In this example image below, Chris Carpenter's player ID was not found in the projections (probably because he's retired).

Step	Description

	PLAYERID	LNAME	FNAME	TEAM	POS	IDFANG	W	G
88	carmofa01	Hernandez	Roberto	N/A	P	3273	8	
89	carpean01	Carpenter	Andrew	SD	P	9533	0	
90	carpech01	Carpenter	Chris	N/A	P	1292	#N/A	

These errors can cause big problems with the rankings. It would be better to have the W, ER, and SO's for a player to be zero or blank.

To accomplish this, we can use the "IFERROR" formula and wrap it around our original formula.

This is the original formula in the cell:

=VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[W]),FALSE)

Surrounding the VLOOKUP formula with the IFERROR formula we get:

=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[W]),FALSE),0)

I recommend using a 0, but if you want it to be a blank instead of a zero, use this:

=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[W]),FALSE),"")

29. The formulas for GS, SV, IP, H, ER, HR, SO, BB, and FIP are shown below.

GS:

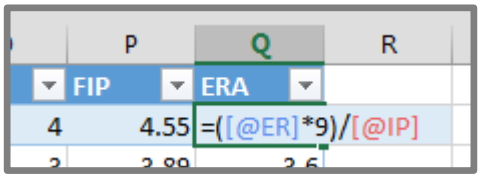
=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[GS]),FALSE),0)

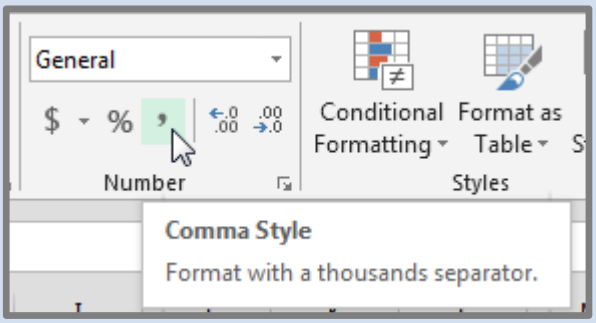
SV:

=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[SV]),FALSE),0)

IP:

=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[IP]),FALSE),0)

Step	Description
	H: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[H]),FALSE),0)** ER: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[ER]),FALSE),0)** HR: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[HR]),FALSE),0)** SO: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[SO]),FALSE),0)** BB: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[BB]),FALSE),0)** FIP: **=IFERROR(VLOOKUP([@IDFANGRAPHS],STEAMER_P, COLUMN(STEAMER_P[FIP]),FALSE),0)**
30.	I don't pull ERA or other easily calculable rate statistics (I will pull FIP), like WHIP, directly from the projections. I prefer to recalculate them with a formula after the underlying statistics have been pulled. To do this, type "ERA" in as the next column header. Then enter the formula to calculate ERA (=([@ER]*9)/[@IP]). 

Step	Description
	If you're not exactly sure of the convention for the formulas (with the brackets and @ symbols) you can always use your mouse to click on the values in the "ER" and "IP" columns and Excel will translate it into the =(@ER]*9)/[@IP] format for you. Repeat this step to add WHIP and any other rate statistics you desire (K/9, K/BB, B/9, etc.). You might notice that these rate formulas can also result in errors if a player does not have a projection (dividing by 0 causes an error). You can use the IFERROR formula around the calculation to clean this up. Here are the formulas I use for ERA and WHIP: ERA: **=IFERROR(([@ER]*9)/[@IP],0)** WHIP: **=IFERROR(([@BB]+[@H])/[@IP],0)**
31.	Most statistics don't need formatting, but ERA and WHIP will. In my file, ERA is located in column "Q". Click on the "Q" column label (or whatever column ERA is in for you) to select the entire ERA column. Then on the Home tab of the ribbon, click on the comma number format.  Repeat this same step for WHIP (column R in my example file).
32.	Save the file. You've now successfully combined pitcher information and projected pitching stats into one table.

WRAP UP

We have now completed setting up our hitter and pitcher worksheets that will be used to rank those players and we have also set up our league scoring settings.

In the next part of the book we'll pull those scoring settings to the rankings sheets and calculate projected points for each player.

DO YOU HAVE ANY QUESTIONS?

Do you have questions about Part 4? Or want to see what others have asked? Check here.

EXAMPLE EXCEL FILE

Download the example spreadsheet illustrating the work done in this part here. Or you can download all spreadsheets for the entire book here.

PART 5 – CALCULATING PROJECTED POINTS

INTRODUCTION

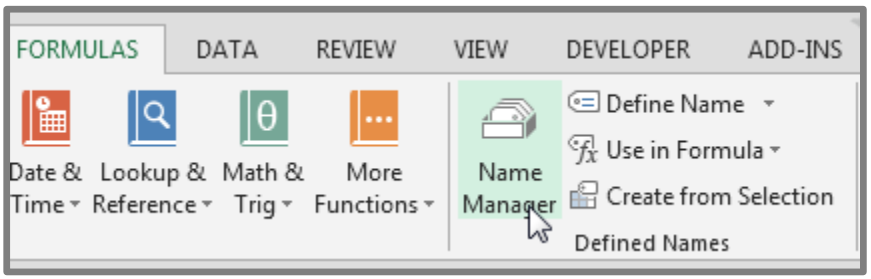
In this part of the book we will use the named cells created in Part 2 along with our projection information on the "Hitter Ranks" and "Pitcher Ranks" sheets to calculate total projected points for each hitter and pitcher.

EXCEL FUNCTIONS AND FORMULAS IN THIS PART

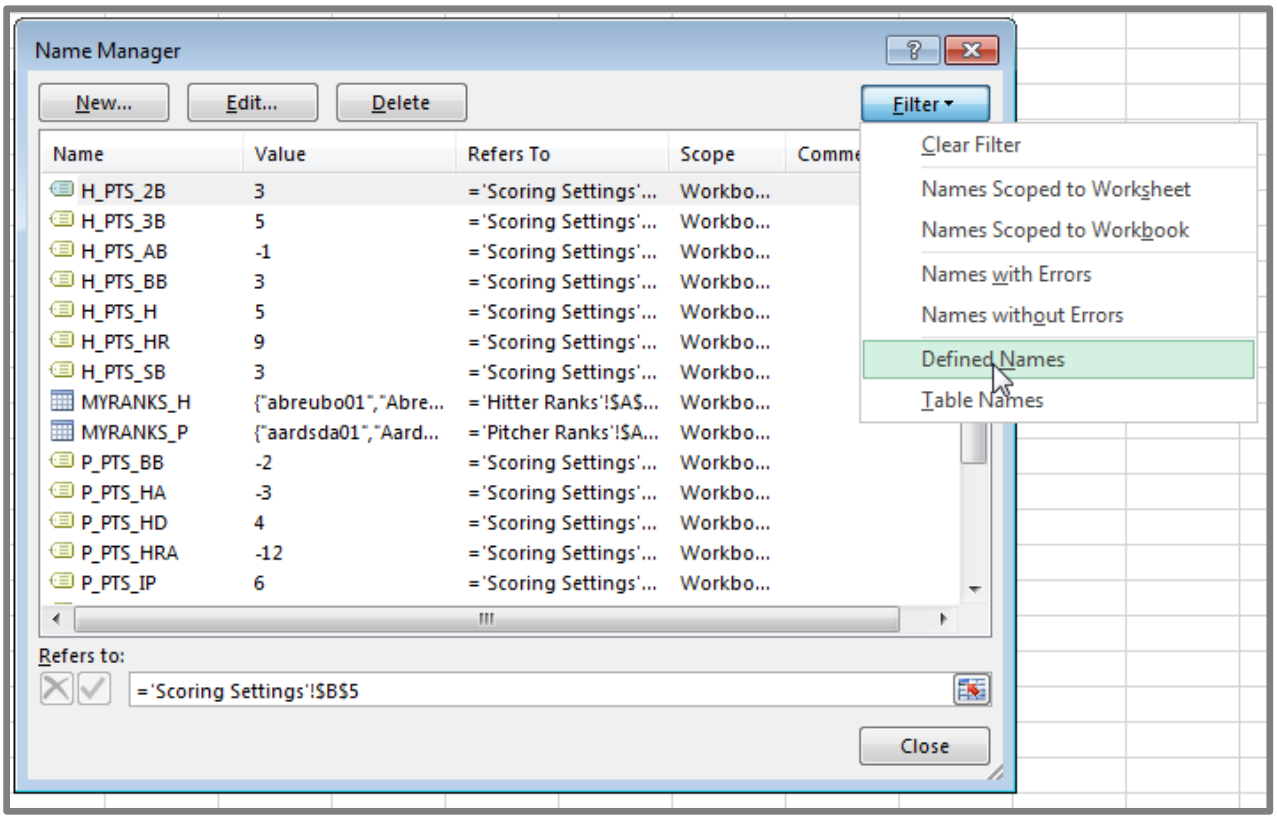
We'll just be doing some basic addition and multiplication. We won't be adding in any new features, but we will be doing this basic math using the named cells for your league's scoring settings that we created in earlier parts of the book.

	A	B	C	D	E
1	Hitter Points			Pitcher Points	
2	AB	-1		IP	6
3	H	5		K	2
4	BB	3		BB	-2
5	2B	3		HA	-3
6	3B	5		SV	5
7	HR	9		HD	4
8	SB	3		HRA	-12

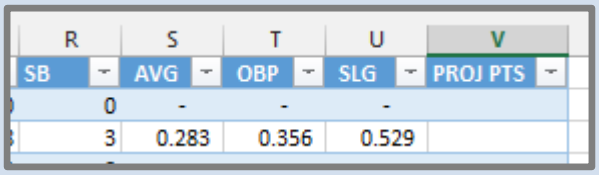
To refresh your memory and to see the complete list of named cells, access the "Formulas" tab of the Ribbon and then click the "Name Manager" button.

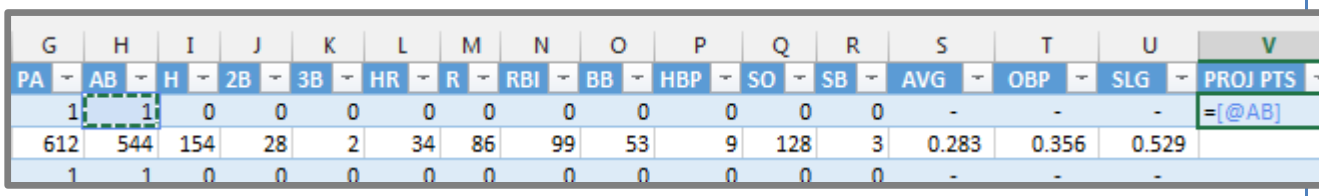
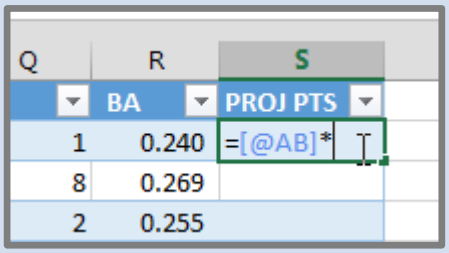


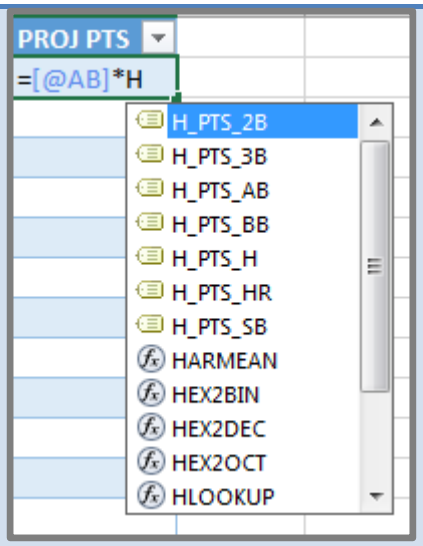
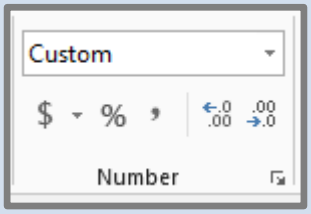
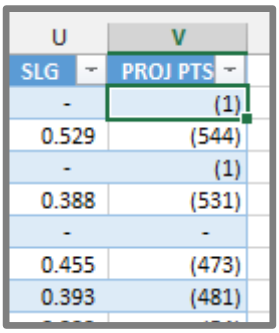
The list will display all named cells/ranges and named tables. To view only named cells, click on the "Filter" drop down menu and choose "Defined Names".

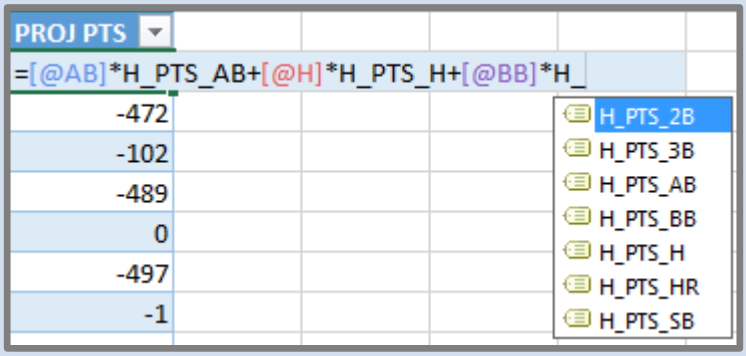


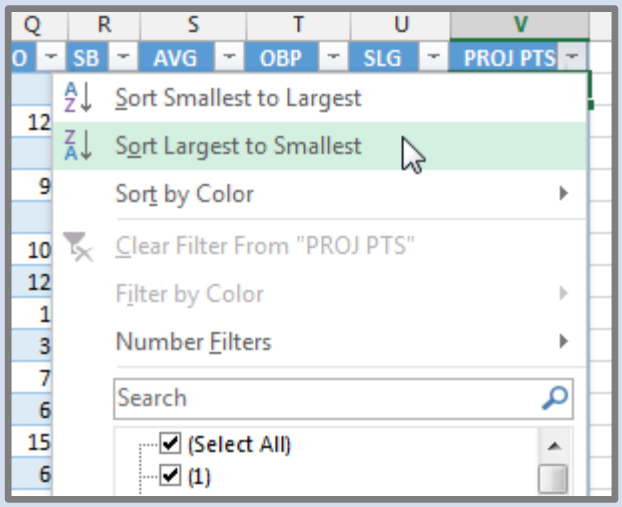
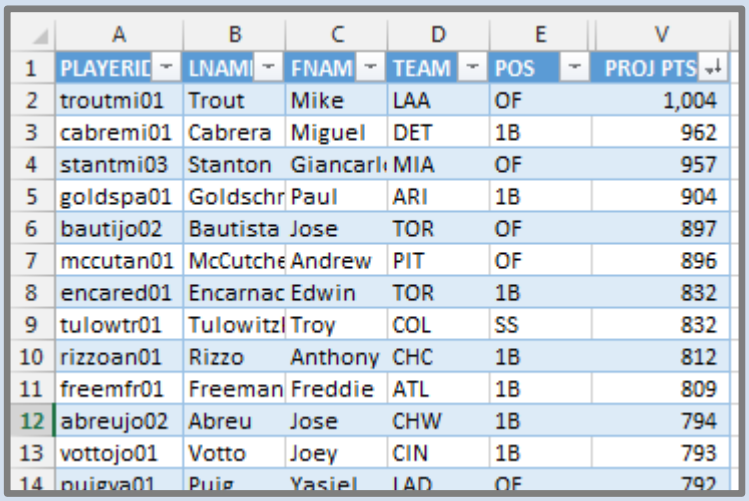
STEP-BY-STEP INSTRUCTIONS

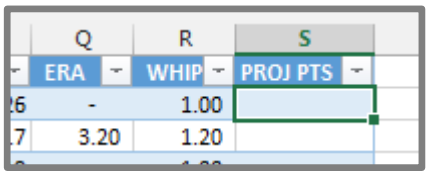
Step	Description
1.	Go to the "Hitter Ranks" tab in the Excel file. In the first open column next to the table data (e.g. cell V1), type in "PROJ PTS" as the column header. Excel should expand the table to include this new column. 
2.	Recall from looking at our named cells above that we named our hitting point values using a "H_PTS_" prefix followed by the abbreviation for the stat category. In my example league, the hitting point values have the following names in Excel: • H_PTS_AB • H_PTS_H

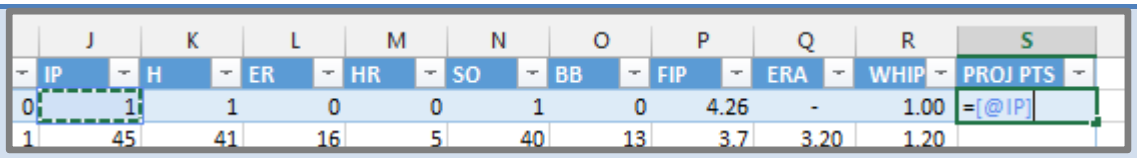
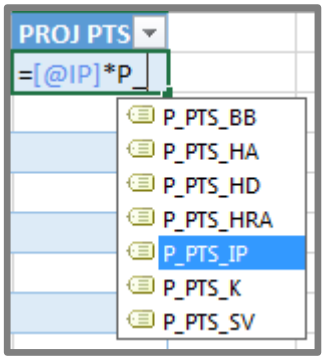
Step	Description
	• H_PTS_BB • H_PTS_2B • H_PTS_3B • H_PTS_HR • H_PTS_SB Follow the steps below using the scoring categories and named cells that you set up. Follow these steps with your league in mind. We'll now use those names to build a formula to calculate projected points. In my example league, the first hitting scoring category is At Bats (H_PTS_AB). In the first empty cell below the "PROJ PTS" header (e.g. cell V2), type an "=" and then click on the corresponding stat for the player in this row. My first player is Bobby Abreu (wow!). So I clicked in cell H2, the projected ABs for Abreu.  G H I J K L M N O P Q R S T U V PA AB H 2B 3B HR R RBI BB HBP SO SB AVG OBP SLG PROJ PTS 1 1 0 0 0 0 0 0 0 0 0 0 - - - =[@AB] 612 544 154 28 2 34 86 99 53 9 128 3 0.283 0.356 0.529 1 1 0 0 0 0 0 0 0 0 0 0 - - -
3.	While still editing this formula we've started, we must now multiply the projected AB for Bobby Abreu by the point value for AB. Type the sign for multiplication (the *, or SHIFT + 8). Then begin to type "H_PTS_".  Q R S BA PROJ PTS 1 0.240 =[@AB]* 8 0.269 2 0.255 Excel should recognize the name you're typing and present you with a list of named cells which follow that pattern. Once you see this list you can double-click on the desired name, use your arrow keys to select "H_PTS_AB" and hit TAB to choose it, or just continue typing the full name.

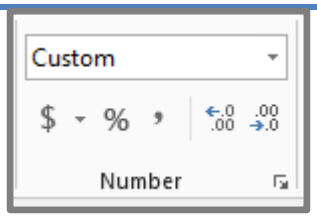
Step	Description
	 In my scoring system, I want "H_PTS_AB". Hit enter to save the formula at this point. My completed formula at this point is: **=[@AB]*H_PTS_AB** You may need to use the "Number" format options on the "Home" tab of Excel's menu system to adjust the appearance of your points. 
4.	Review the output of the "PROJ PTS" column at this point to make sure it seems to be working correctly. 

Step	Description
	The league I play in has an unusual scoring system that penalizes for outs (just like in real baseball, an out is a bad thing). That's where the negative value for an AB comes in.
5.	Repeat steps 2, 3, and 4 above in order to add in the other hitting scoring categories of your league. Just begin at the end of your original "PROJ PTS" formula, add a "+" sign, and add in the next scoring category and point value. It may be a good idea to build the formula one stat category at a time so that you can do a quick reasonableness check. For example, building on the formula I started above, to add points for hits, I would edit my "PROJ PTS" formula to be: **=[@AB]*H_PTS_AB+[@H]*H_PTS_H** Continue until you have added in the points for each category.  My final formula is: **=[@AB]*H_PTS_AB+[@H]*H_PTS_H+[@BB]*H_PTS_BB+[@2B]*H_PTS_2B+[@3B]*H_PTS_3B+[@HR]*H_PTS_HR+[@SB]*H_PTS_SB** =[@AB]*H_PTS_AB+[@H]*H_PTS_H+[@BB]*H_PTS_BB+[@2B]*H_PTS_2B+[@3B]*H_PTS_3B+[@HR]*H_PTS
6.	The accountant in me really really wants you to double check the formula you just created.

Step	Description
	Make sure it seems consistent and that the [@AB] argument is paired with "H_PTS_AB", and all other categories align with their point value name).After all, it probably only took you a couple of minutes to create this formula. It will probably only take another 30 seconds to review it closely... And your WHOLE fantasy season depends on it!
7.	If the formula looks good, you can give it one more great check by sorting the "Hitter Ranks" tab by "PROJ PTS" to see who the best players are. To do this, click the downward pointing filter arrow on the "PROJ PTS" column. Then click on "Sort Largest to Smallest".  Hopefully you'll find that the players come out in an order that seems appropriate given your scoring system (does Mike Trout come out near the top?). 

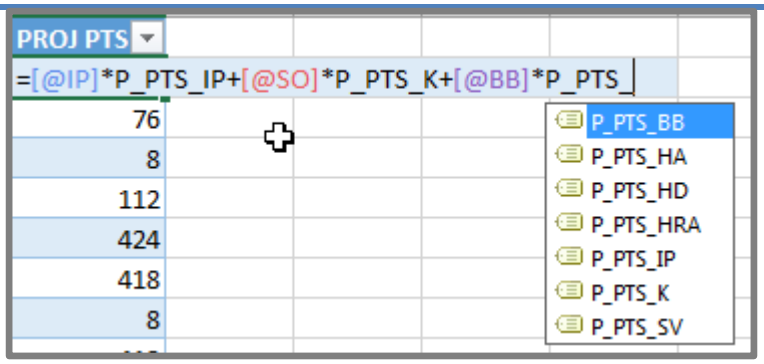
Step	Description
	Now let's move on to the pitchers.
8.	Go to the "Pitcher Ranks" tab in the Excel file. In the first open column next to the table data (e.g. cell S1), type in "PROJ PTS" as the column header. Excel should expand to include this new row.  Recall that we named our pitching point values using a "P_PTS_" prefix followed by the abbreviation for the stat category. In my example league, the pitching point values have the following names in Excel: • P_PTS_IP • P_PTS_K • P_PTS_BB • P_PTS_HA • P_PTS_SV • P_PTS_HD • P_PTS_HRA Follow the steps below using the scoring categories and named cells that you set up. Follow these steps with your league in mind.
9.	Let's start to build a formula to calculate projected pitching points, starting with the first pitching point category. In my example, the first pitching category is Innings Pitched (P_PTS_IP).In the first empty cell in the "PROJ PTS" (e.g. S2), type an "=" and then click on the corresponding stat for the player in this row. My first player is David Aardsma (who at one point in time had fantasy-relevance, so he made it into the PLAYERIDMAP). To include Aardsma's IP, I clicked in cell J2 (remember, your columns may be slightly different depending on when you and where you downloaded your projection data from).

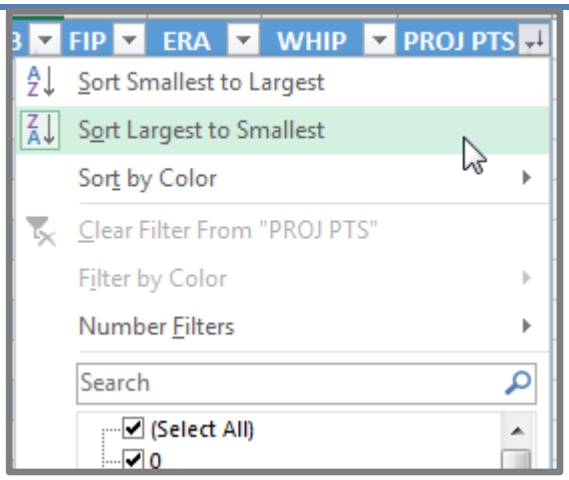
Step	Description
	
10.	While still editing this formula we've started, we must now multiply the projected IP for Aardsma by the point value for IP. Type the sign for multiplication (the *, or SHIFT + 8). Then begin to type "P_PTS_". Excel should recognize the name you're typing and present you with a list of named cells which follow that pattern. Once you see this list you can double-click on the desired name, use your arrow keys to select "P_PTS_IP" and hit TAB to choose it, or just continue typing the full name.  In my scoring system, I want "P_PTS_IP". Hit enter to save the formula at this point. My completed formula at this point is: **=[@IP]*P_PTS_IP** You may need to use the “Number” format options on the “Home” tab of Excel’s menu system to adjust the appearance of your points.

Step	Description
	
11.	Review the output of the "PROJ PTS" column at this point to make sure it seems to be working correctly.

Q	R	S
ERA	WHIP	PROJ PTS
-	1.00	6
3.20	1.20	270
-	1.00	6
-	1.00	6
-	1.00	6
3.11	1.24	330
9.00	1.00	6
-	1.00	6
3.44	1.25	330
2.91	1.15	390
3.87	1.30	978
-	1.00	6
-	1.00	6
3.75	1.30	576
4.03	1.29	750
3.91	1.30	1092

12.	Repeat steps 9, 10, and 11 above in order to add in the other pitching scoring categories of your league. Just begin at the end of your original “PROJ PTS” formula, add a “+” sign, and add in the next scoring category and point value. It may be a good idea to build the formula one stat category at a time so that you can do a quick reasonableness check. For example, building on the formula I started above, to add points for strike outs, I edit my "PROJ PTS" formula to be: **=[@IP]*P_PTS_IP+[@SO]*P_PTS_K** Continue until you have added in the points for each category.

Step	Description
	 My final formula is: **=[@IP]*P_PTS_IP+[@SO]*P_PTS_K+[@BB]*P_PTS_BB+[@H]*P_PTS_HA+[@SV]*P_PTS_SV+[@HR]*P_PTS_HRA** =[@IP]*P_PTS_IP+[@SO]*P_PTS_K+[@BB]*P_PTS_BB+[@H]*P_PTS_HA+[@SV]*P_PTS_SV+[@HR]*P_PTS_ You might have noticed that my league's scoring system uses Holds as a pitching category but I've neglected to include that in my formula. I have not been able to find a reliable projection system that projects Holds, so I've just ignored it. I have no research to back this up, but I feel I can largely ignore Holds during the draft. By studying team depth charts and watching bullpen usage early in the season, I think I'll be able to identify unexpected sources of Holds during the season.
13.	The entire quality of your draft depends on this formula. Double check the consistency of your formula (check that the [@IP] argument is paired with "P_PTS_IP", and all other categories align with their point value name).
14.	If the formula looks good, you can give it one more great check by sorting the "Pitcher Ranks" tab by "PROJ PTS" to see who the best players are. To do this, click the downward pointing filter arrow on the "PROJ PTS" column. Then click on "Sort Largest to Smallest".

Step	Description
	 Hopefully you'll find that the players come out in an order that seems appropriate given your scoring system (does Clayton Kershaw come out near the top?). 1 PLAYERID LNAME FNAME TEAM POS IDFANC W GS SV IP H ER HR 2 fernajo01 Fernande: Jose MIA P 11530 12 30 0 192 162 70 3 darviyu01 Darvish Yu TEX P 13074 15 30 0 192 156 70 4 kershcl01 Kershaw Clayton LAD P 2036 14 30 0 192 164 62 5 strasst01 Strasburg Stephen WAS P 10131 13 29 0 182 155 66 6 wainwad01 Wainwrigl Adam STL P 2233 14 32 0 201 190 72 7 hernafe02 Hernande Felix SEA P 4772 14 30 0 192 173 69 8 bumgama01 Bumgarne Madison SF P 5524 13 31 0 192 171 69 9 salech01 Sale Chris CHW P 10603 13 30 0 192 171 73 10 liriafr01 Liriano Francisco PIT P 3201 12 30 0 192 170 79 11 scherma01 Scherzer Max DET P 3137 14 31 0 192 166 70
15.	Save your file.

WRAP UP

We now have total projected points for both hitters and pitchers, and you might be wondering, "What else is left to do?".

In our next part of the book we'll add the important adjustment for replacement level. Failing to incorporate replacement level into your calculations can lead to some poor decisions.

DO YOU HAVE ANY QUESTIONS?

Do you have questions about Part 5? Or want to see what others have asked? Check here.

EXAMPLE EXCEL FILE

Download the example spreadsheet illustrating the work done in this part here. Or you can download all spreadsheets for the entire book here.

PART 6 – REPLACEMENT LEVEL AND POSITION SCARCITY

INTRODUCTION

In this part of the book we will discuss the concept of replacement level, prove that it can lead to better decision making, demonstrate how it is an objective measure for making positional scarcity adjustments, and then incorporate replacement level adjustments for each position into our projected point values.

ACCOUNTING FOR REPLACEMENT LEVEL

Heading in to the 2015 season, Ryan Braun is projected by Steamer to produce 82 R, 25 HR, 82 RBI, and 13 SB (or 752 points in my example league). Buster Posey is projected for 69 R, 19 HR, 75 RBI, and 1 SB (681 points).

Braun's raw production is clearly superior to that of Posey. But is that all we need to look at to conclude which player is more valuable? Don't we need to include some measure of "replacement level" in this calculation? Isn't that what WAR is all about? Wins Above Replacement?

How do I account for the fact that the day after our fantasy draft I can go out to the free agent listing and pick up an OF that would produce 61 R, 10 HR, 47 RBI, and 15 SB (478 points), or a Catcher that would produce 38 R, 9 HR, 45 RBI, and 7 SB (319 points)?

Clearly the replacement catcher is much less productive than the replacement level OF.

USING POINTS LEAGUE SETTINGS

You've been following me through the creation of a rankings file for an example league. We just finished converting projected statistics into point values for this league, so let's take a look at comparing Braun to Alejandro De Aza (a hypothetical replacement level OF) and Posey to Christian Bethancourt (a hypothetical replacement level catcher).

Player	Projected Points
Ryan Braun	752
Alejandro De Aza	478
Buster Posey	681
Christian Bethancourt	319

Braun is projected for 274 points over the replacement level outfielder and Posey is projected for 362 points more than the replacement level catcher!

That means Posey is roughly 88 points more valuable than Braun, despite having lower overall projected points.

If you're having a hard time digesting that, think of it this way. Let's assume Braun and Posey represent second round draft picks (just go with it, don't argue) and De Aza and Bethancourt will be last round draft picks (replacement level).

The team that takes Braun in the second round and Bethancourt in the last round would be projected for 1,071 points. The team that takes Posey in the second round and De Aza in the last round would be projected for 1,159 points. Again, that's 88 more points than the Braun/Bethancourt combination!

This is why considering replacement level matters.

POSITIONAL SCARCITY ADJUSTMENTS

You have probably come across suggestions or you might have even thought to yourself that you should "bump" a player up your rankings because he plays a weak position. But is this really appropriate? How much do you bump him up?

Another great benefit of incorporating replacement level into your rankings is that it makes your positional scarcity adjustments for you!

You just saw how we proved Posey's 681 points as a catcher are more valuable than Braun's 752 from the outfield. Rather than arbitrarily "bumping" Posey in the rankings, we can figure out exactly where he should be ranked by calculating his "Points Above Replacement".

Let's look at the top 15 projected hitters in my example points league.

LNAME	FNAME	TEAM	POS	PROJ PTS
Trout	Mike	LAA	OF	1,004
Cabrera	Miguel	DET	1B	962
Stanton	Giancarl	MIA	OF	957
Goldschr	Paul	ARI	1B	904
Bautista	Jose	TOR	OF	897
McCutche	Andrew	PIT	OF	896
Encarnac	Edwin	TOR	1B	832
Tulowitzl	Troy	COL	SS	832
Rizzo	Anthony	CHC	1B	812
Freeman	Freddie	ATL	1B	809
Abreu	Jose	CHW	1B	794
Votto	Joey	CIN	1B	793
Puig	Yasiel	LAD	OF	792
Ortiz	David	BOS	DH	760
Braun	Ryan	MIL	OF	752

Not a catcher to be found. But if we presume this league has 24 starting catchers (you need to read this if you play in a two-catcher league), things change significantly when we calculate points above replacement.

LNAME	FNAME	TEAM	POS	PROJ PTS	REPL LEVEL	POINTS OVER REPL
Cabrera	Miguel	DET	3B	1059	519	540
Trout	Mike	LAA	OF	1002	527	475
Mauer	Joe	MIN	C	767	329	438
Tulowitzki	Troy	COL	SS	816	444	372
McCutchen	Andrew	PIT	OF	895	527	368
Goldschmidt	Paul	ARI	1B	904	537	367
Posey	Buster	SF	C	689	329	360
Santana	Carlos	CLE	C	679	329	350
Votto	Joey	CIN	1B	882	537	345
Gonzalez	Carlos	COL	OF	855	527	328
Cano	Robinson	SEA	2B	765	442	323
Puig	Yasiel	LAD	OF	846	527	319
Fielder	Prince	TEX	1B	850	537	313
Encarnacion	Edwin	TOR	1B	824	537	287

Three catchers rocket into the top 10 while OF and 1B are devalued some. This movement that takes place after you calculate Points Over Replacement Level **IS THE POSITIONAL SCARCITY ADJUSTMENT**. Players move exactly the proper amount. No guesswork.

EXCEL FUNCTIONS AND FORMULAS IN THIS POST

Nothing really new here. We'll just be using things we've already used in earlier parts of the book. We will use another VLOOKUP formula, create a table, and use structured references to build some formulas.

STEP-BY-STEP INSTRUCTIONS

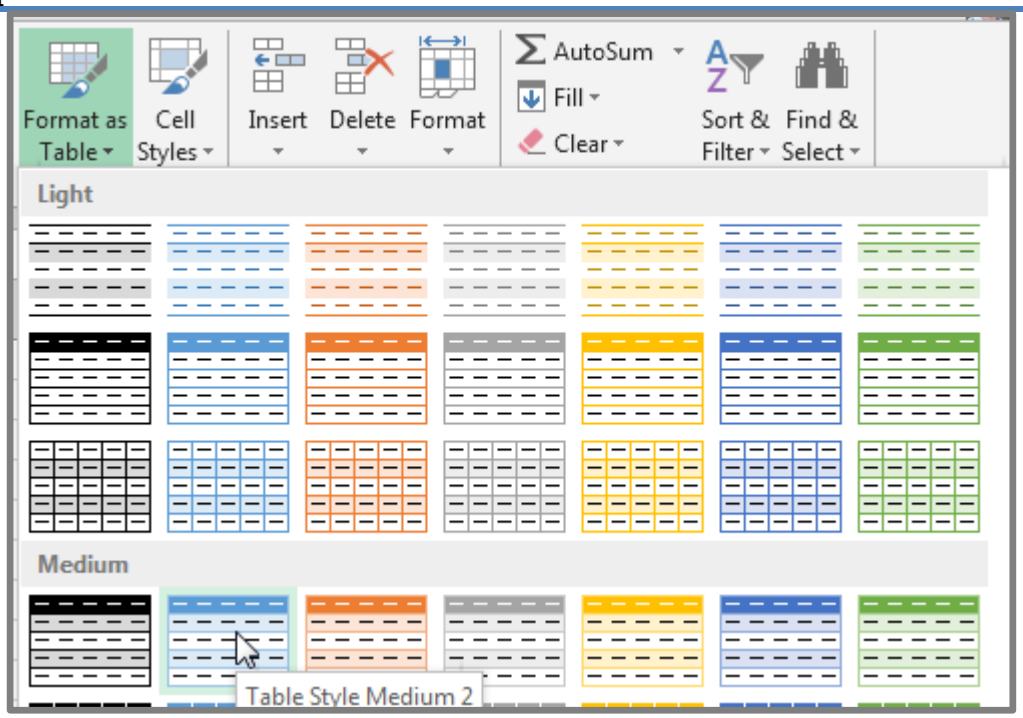
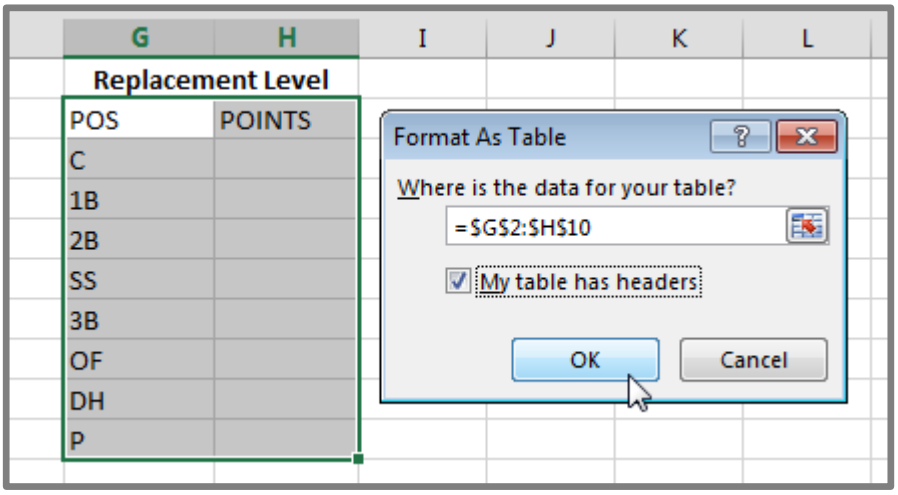
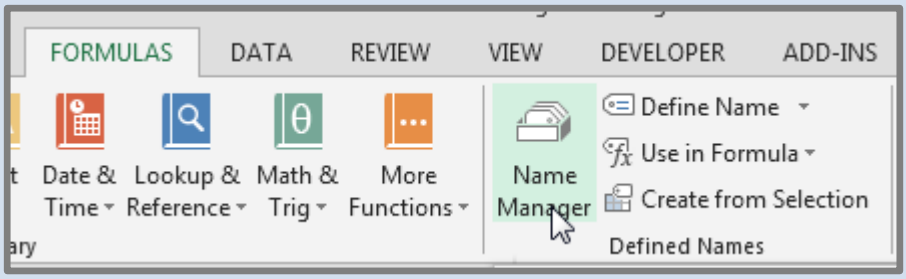
Step	Description
1.	On the "Scoring Settings" sheet, begin to fill out the information you see in columns G and H below.

	A	B	C	D	E	F	G	H
1	Hitter Points			Pitcher Points			Replacement Level	
2	AB	-1		IP	6		POS	POINTS
3	H	5		K	2		C	
4	BB	3		BB	-2		1B	
5	2B	3		HA	-3		2B	
6	3B	5		SV	5		SS	
7	HR	9		HD	4		3B	
8	SB	3		HRA	-12		OF	
9							DH	
10							P	

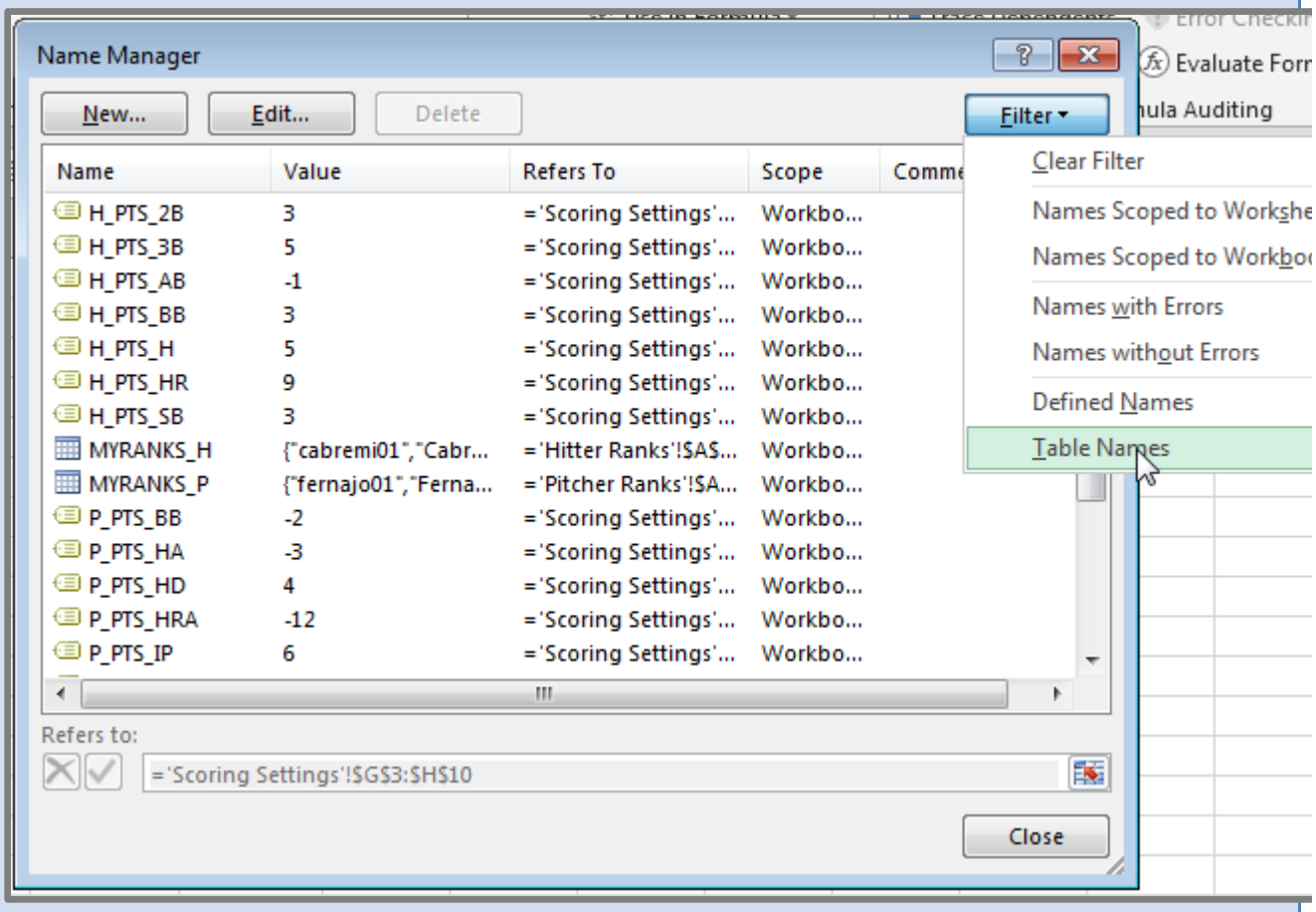
2. Click and drag with your mouse to select the area of the table you have started (ignore the "Replacement Level" heading).

F	G	H	I
	Replacement Level		
	POS	POINTS	
	C		
	1B		
	2B		
	SS		
	3B		
	OF		
	DH		
	P		

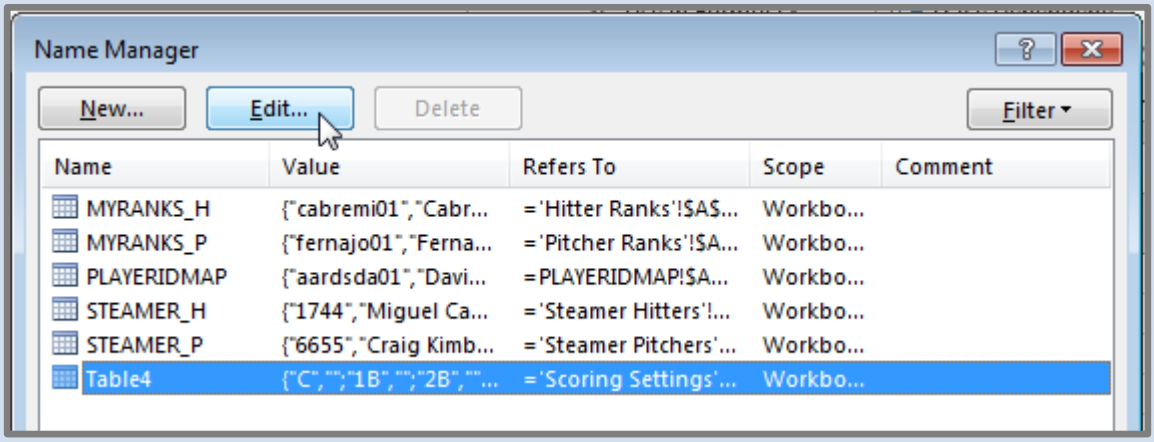
On the "Home" tab of the Ribbon, select the "Format as Table" drop down and choose a color scheme.

Step	Description
	 Make sure to specify that your table has headers (check the box). And hit OK. 
3.	Just like with all our other tables, we should give this a name. On the "Formulas" tab of the Ribbon, click on "Name Manager". 

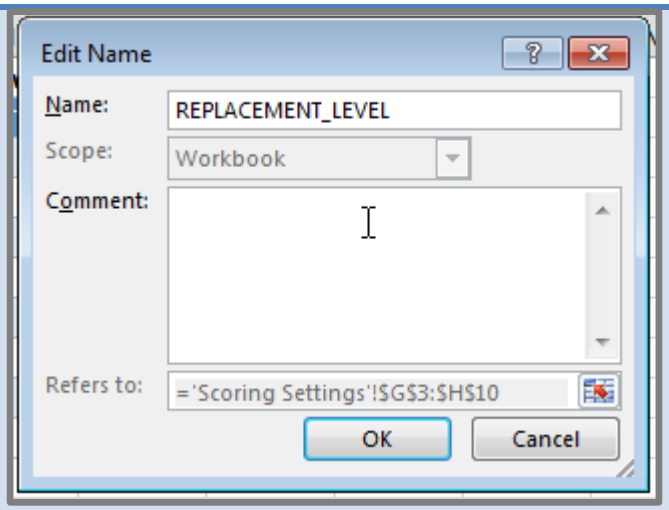
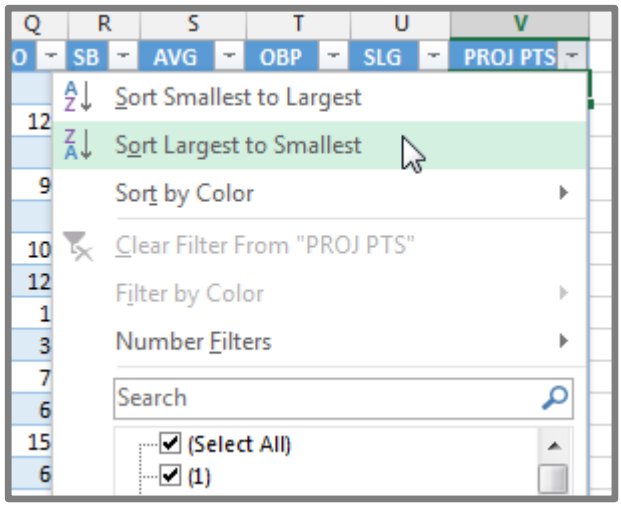
Step	Description
	When Name Manager appears, choose to Filter the list by "Table Names".

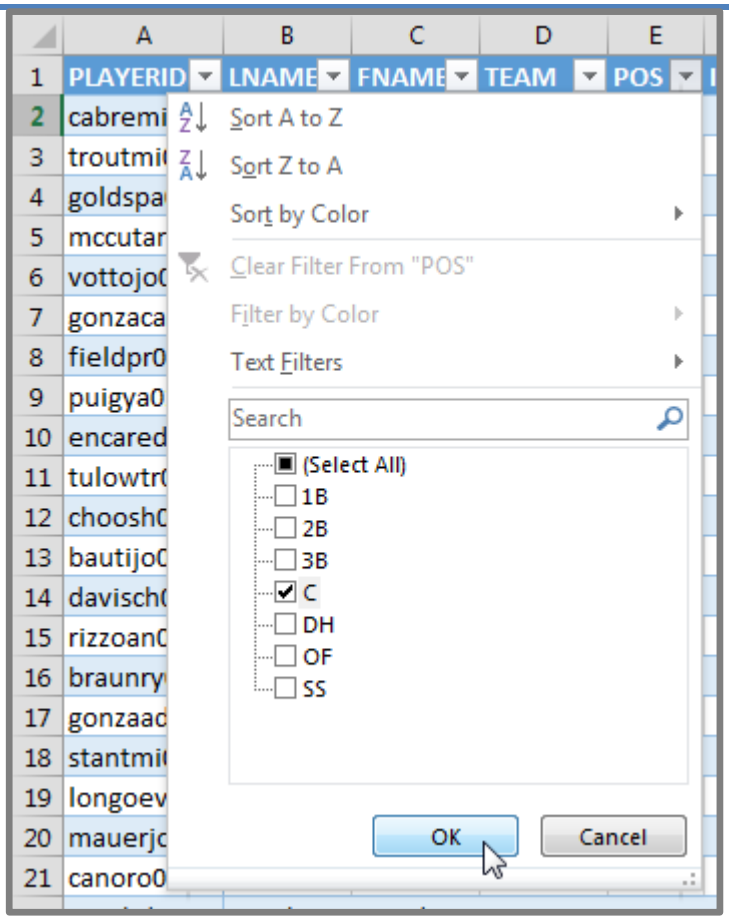
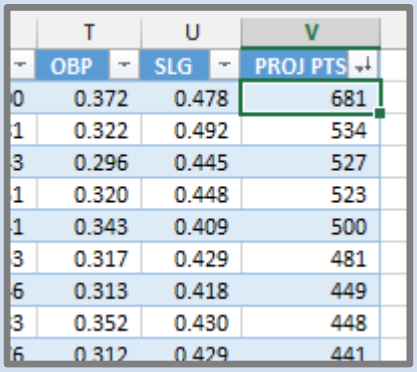


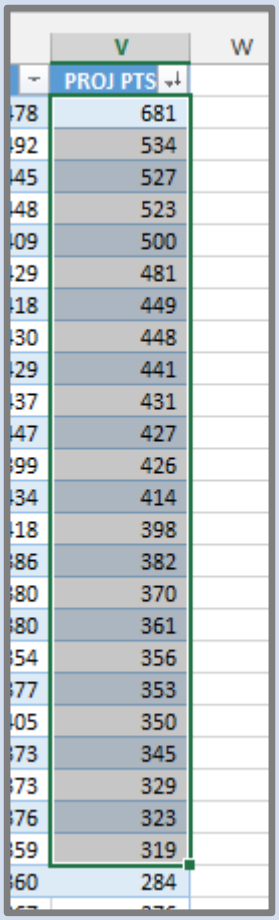
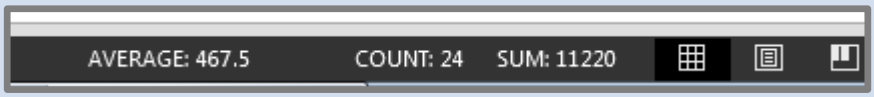
Locate the only unnamed table (mine is "Table4" in the example below). Click on the table in the list and then hit the "Edit..." button.



Change the name of this to "REPLACEMENT_LEVEL" and hit "OK" to save the name. Then hit "Close" to exit the "Name Manager".

Step	Description
	
4.	Return to the "Hitter Ranks" tab. Use the drop down arrow on the "PROJ PTS" column to ensure it is sorted in descending order (players with most projected points at the top).  Now click on the downward pointing arrow on the "POS" column. Click/toggle the "Select All" box until all selections are cleared (none are checked). Then click to select only the "C" position. Click "OK" to accept this filter.

Step	Description
	
5.	Consider your league size and roster rules and develop an approximation of how many catchers will likely be drafted. For example, in a 12-team league in which each team starts two catchers, there likely won't be any catchers starting at the DH/UTIL spot. This means that 24 catchers will be drafted. To determine who the replacement level catcher will be, click once on the "PROJ PTS" value of the first catcher (Posey in my example). 

Step	Description
	Then click and drag to select more players (you can see an image of this below, make sure you are highlighting only one column).  As you continue to select more players, watch the "Count:" field on the Excel status bar. 
6.	Stop highlighting when the count of catchers reaches the number you expect to be drafted (e.g. 24). The replacement level player is the very next player that falls outside of the top 24.In the screenshot below you can see that the first catcher not to be drafted will be Rene Rivera. His projected points are 284.

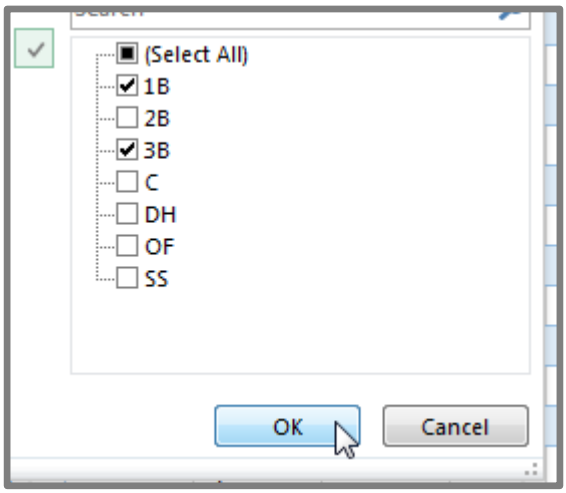
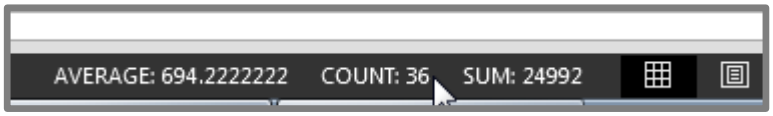
Step	Description

B	C	D	E	V
LNAMI	FNAM	TEAM	POS	PROJ PTS
Posey	Buster	SF	C	681
Rosario	Wilin	COL	C	534
Gattis	Evan	ATL	C	527
McCann	Brian	NYY	C	523
Martin	Russell	TOR	C	500
D'Arnauc	Travis	NYM	C	481
Wieters	Matt	BAL	C	449
Lucroy	Jonathar	MIL	C	448
Perez	Salvador	KC	C	441
Gomes	Yan	CLE	C	431
Mesorac	Devin	CIN	C	427
Grandal	Yasmani	LAD	C	426
Ramos	Wilson	WAS	C	414
Molina	Yadier	STL	C	398
Ruiz	Carlos	PHI	C	382
Montero	Miguel	CHC	C	370
Norris	Derek	OAK	C	361
Iannetta	Chris	LAA	C	356
Avila	Alex	DET	C	353
Zunino	Mike	SEA	C	350
Saltalam	Jarrod	MIA	C	345
Castro	Jason	HOU	C	329
Chirinos	Robinsor	TEX	C	323
Bethanco	Christian	ATL	C	319
Rivera	Rene	SD	C	284
Pierzynsk	A.J.	N/A	C	276

7. Return to the "Scoring Settings" sheet.

And type in the projected points for the replacement level catcher into our "REPLACEMENT_LEVEL" table created earlier (e.g. 284 for Rene Rivera).

Replacement Level	
POS	POINTS
C	284
1B	
2B	
SS	
3B	
OF	
DH	
P	

Step	Description
8.	Repeat steps 4 - 7 for each position. If your league has Corner Infield and Middle Infield roster spots, determining replacement level for the infield positions involves some additional work. The easiest method (it's a little imprecise) would be to assume 18 1B will be drafted and 18 3B will be drafted (12 1B to play the 1B slot, 6 1B to play CI, 12 3B to play 3B slot, and 6 3B to play CI).  If you want to be more precise, set your filters to show both 1B and 3B at the same time. Then click and drag so you can see the count of the 36 top combined 1B and 3B. Then manually count to verify there are at least 12 1B and 12 3B (to fill the actual 1B and 3B positions).  As long as you have at least 12 1B and 12 3B, nothing else is necessary. If you don't have at least 12 3B, take one 1B out of your group and add in the next best 3B. For example, when I ran through my hypothetical league I found that the top 36 corner infielders were made up of 22 1B and 14 3B.

Step	Description

The very next first basemen and the very next third basemen outside of that top 36 are your replacement level players.

You must follow a similar process to account for the UTIL/DH spot in your roster. This will push replacement level even further down the list of players.

The UTIL/DH slot is likely going to end up changing who the last 1B and OF are. Instead of drafting the top 22 1B (in my example), my league will also likely draft even more 1B to put at the UTIL/DH spot.

NOTE: Explaining how to identify replacement level in writing is very difficult. It's probably even harder for you to understand my scattered thoughts.

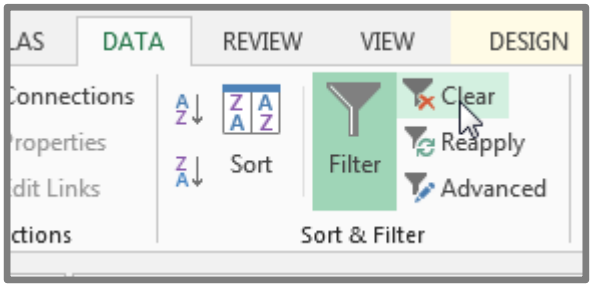
That's why I created this video to show a practical approach you can use. The video is using "Standings Gain Points" instead of "Projected Points", but the exact same approach can be followed. If you do follow the approach in the video you'll have a very easy to understand color-coded result letting you know exactly who the replacement level players are.

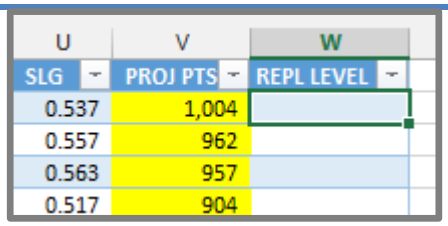
	A	B	C	D	E	V
1	PLAYERID	LNAME	FNAME	TEAM	POS	PROJ PTS
144	ramirar01	Ramirez	Aramis	MIL	3B	501
150	saundmi01	Saunders	Michael	TOR	OF	496
159	baezja01	Baez	Javier	CHC	SS	480
164	alcanar01	Alcantara	Arismend	CHC	2B	473
169	vargake01	Vargas	Kennys	MIN	1B	467
273	riverre01	Rivera	Rene	SD	C	284

In the end, you must verify that your projected pool of draftable players satisfies your league's roster requirements. If you are in a 12-team league with traditional roster requirements (where each team drafts 14 hitters), select the top 168 players and verify that at least 24 C, 36 CI, 36 MI, and 60 OF are included.

Provided these limits are met, the replacement level points for each position is very next 1B, 2B, SS, 3B, or OF that fall outside of your pool of draftable players.

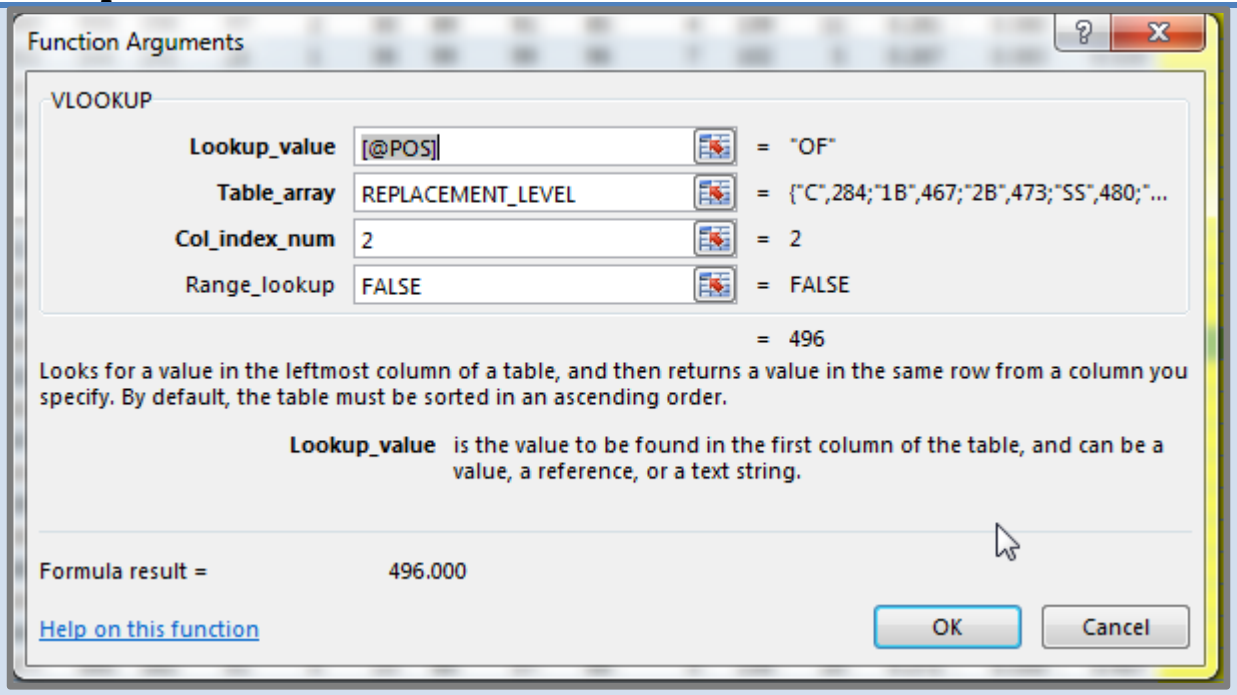
REPLACEMENT LEVEL FOR THE UTIL SPOT: Your UTIL slot is likely to be filled by a variety of positions (1B, 2B, OF, etc.). Because it can be filled by a player of any position, I believe you should make the replacement level points for DH/UTIL equal to the position with the highest replacement level (this is covered in the video too).

Step	Description
9.	Follow steps 4-7 to determine replacement level for pitchers. This should be much simpler because even if your league uses specific "SP" and "RP" spots, you don't need to determine replacement level for these differently unless your league has a very unique configuration that forces you into drafting relief pitchers to fill spots. After you have identified all your replacement level players, make sure you've filled out the entire REPLACEMENT_LEVEL table. **Replacement Level** POS / POINTS C 284 1B 467 2B 473 SS 480 3B 501 OF 496 DH 501 P 422
10.	Let's focus just on hitters for a few steps. We now need to adjust each player's projected points to reflect their points above replacement level (like we did above in our Braun vs. Posey example). Go to your "HITTER RANKS" tab. Make sure you have cleared any position filters. To do this, click once on a piece of data in the "HITTER RANKS" tab. Then go to the "Data" tab and click the "Clear" button.  Now add a new column header next to your "PROJ PTS" column. This is where we will pull in the Replacement Level points for each player. Column W is the first unused column in my example file. So click in cell W1, type "REPL LEVEL", and hit Enter.

Step	Description
	
11.	To populate this "REPL LEVEL" column we want Excel to look at each player's position, go find that position in the replacement level table we just set up on the "Scoring Settings" tab, and bring back the replacement level point value for that position. We can do this using a VLOOKUP formula. Recall that the VLOOKUP formula is used to search in another table for a specific value (look in the replacement level information and find a specific position). The formula to use for the VLOOKUP in cell W2 is: **=VLOOKUP([@POS],REPLACEMENT_LEVEL,2,FALSE)** You might be wondering why I typed a "2" in for the Col_index_num. The reason is because the REPLACEMENT_LEVEL table does not start in Column A, like all our other tables have to this point. The formula "COLUMN(REPLACEMENT_LEVEL[POINTS])" returns an 8 because it's in column H of my "Scoring Settings" tab.

U	V	W
SLG	PROJ PTS	REPL LEVEL
0.537	1,004	
0.557	962	
0.563	957	
0.517	904	

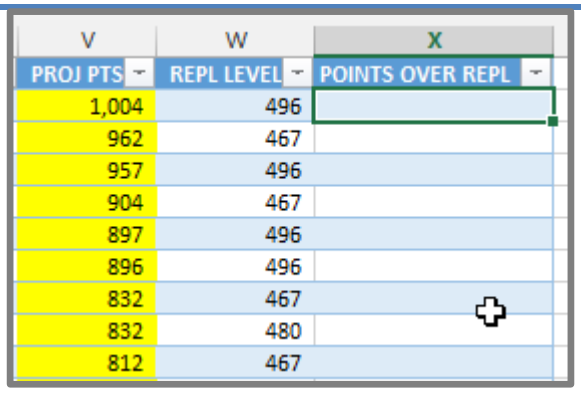
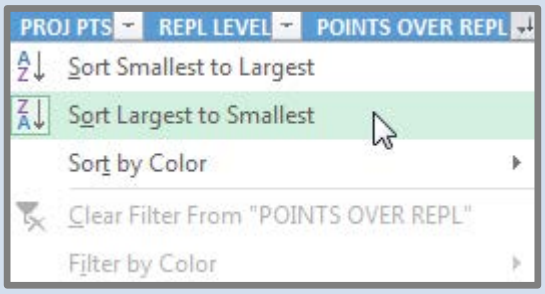
Step	Description



Review the output of the formula. An easy way to see if everything is working properly is to look for a catcher in the list and verify the point value is consistent with your results from step 7 above.

V	W
PROJ PTS	REPL LEVEL
1,004	496
962	467
957	496
904	467
897	496
896	496
832	467
832	480
812	467
809	467
794	467
793	467
792	496
760	501

12. Now let's add a column to calculate points above replacement level for each player. My first empty column in my example file is column "X". So in cell X1, I'll type "POINTS OVER REPL" as the column header and hit Enter.

Step	Description
	 The formula here will simply be: **=[@[PROJ PTS]]-[@[REPL LEVEL]]** Type the equals sign and then use your mouse to click on the "PROJ PTS" and "REPL LEVEL" columns as needed while building the formula.
13.	As we looked at in the introduction to this part, it's possible that player rankings (especially for catchers) can shift after you take replacement level into account. Sort the "POINTS OVER REPL" column by clicking on the downward pointing triangle over the column. Then select "Sort Largest to Smallest". 
14.	The POINTS OVER REPL column becomes very important if we are to eventually calculate dollar values for players. It's important that this column show 0 for the replacement level players in your league. **YOU NEED TO CHECK THIS.** Recall that my example spreadsheet is being built for a 12-team league where each team drafts 14 hitters. That would be 168 hitters drafted in total.

Step	Description
	You can see in my example below that as I approach the 168th player and move into the replacement level players the "POINTS OVER REPL" approach zero. You should see this same thing! As you approach the last few drafted players the "POINTS OVER REPL" should approach zero.

	PLAYERID	LNAM	FNAM	TEAM	POS	PROJ PTS	REPL LEVEL	POINTS OVER REPL
163	kendrho01	Kendrick	Howie	LAD	2B	494	473	21
164	polloaj01	Pollock	A.J.	ARI	OF	516	496	20
165	lowrije01	Lowrie	Jed	OAK	SS	499	480	19
166	riosal01	Rios	Alex	N/A	OF	513	496	17
167	kiermke01	Kiermaie	Kevin	TB	OF	512	496	16
168	coghlch01	Coghlan	Chris	CHC	OF	507	496	11
169	millebr02	Miller	Brad	SEA	SS	489	480	9
170	ramirar01	Ramirez	Aramis	MIL	3B	501	501	-
171	saundmi01	Saunders	Michael	TOR	OF	496	496	-
172	baezja01	Baez	Javier	CHC	SS	480	480	-
173	alcanar01	Alcantara	Arismenc	CHC	2B	473	473	-
174	wongko01	Wong	Kolten	STL	2B	473	473	-
175	vargake01	Vargas	Kennys	MIN	1B	467	467	-
176	riverre01	Rivera	Rene	SD	C	284	284	-
177	lemahdj01	LeMahie	DJ	COL	2B	472	473	(1)
178	grandcu01	Granders	Curtis	NYM	OF	494	496	(2)
179	casteni01	Castellar	Nick	DET	3B	498	501	(3)

	If you don't see this type of result, you need to reevaluate replacement level and make adjustments to the "REPLACEMENT LEVEL" table on the "Scoring Settings" tab.
15.	Repeat steps 10 - 14 for pitchers. In a 12-team league that rosters 9 pitchers, 108 starting pitchers will be drafted, leaving the 109th pitcher as "replacement level". Adjust this for your own league's settings. Even if your league has different spots for Starting Pitchers and Relief Pitchers, I do not recommend determining replacement level for RP and SP. Make sure you perform the same check of your pitchers. As you approach replacement level, the "POINTS OVER REPL" should move towards 0. As you move below replacement level, you should see the points go negative.
16.	Save your file. You have now completed your points league hitter and pitcher rankings!

WRAP UP

We have calculated the points over replacement level for each player. You no longer have to make arbitrary decisions because you're trying to account for "positional scarcity". The points over replacement level factors this in. It's not as simply as comparing the points over replacement level for a catcher and comparing them to an outfielder.

DO YOU HAVE ANY QUESTIONS?

If you have questions about Part 6, it would be great if you can ask them here.

EXAMPLE EXCEL FILE

Download the example spreadsheet illustrating the work done in this part here. Or you can download all spreadsheets for the entire book here.

PART 7 – DOLLAR VALUE CALCULATION SETTINGS

INTRODUCTION

In this part of the book we will begin taking steps toward converting players' point totals into dollar values. Specifically, we'll be adding some settings information about how the dollar values will be calculated. We will set these up in such a way so you can easily tailor the dollar values for any size league.

EXCEL FUNCTIONS AND CONCEPTS IN THIS POST

"COMPARTMENTALIZING" COMPLEX EQUATIONS

The process of converting a point total for each player to a dollar value is not overly complex. At a very high level, we will:

- Determine the total number of points that we expect to be drafted
- Determine the total pool of dollars the league has to spend on these points
- Calculate “dollar value per point” based on the information above
- Multiply each player’s projected point total by the “dollar value per point”

That's not terribly difficult to do in one formula. The dollar value calculation for a player might look like this:

=(12*260)/(SUM('Pitcher Ranks'!$U$2:$U$109)+SUM('Hitter Ranks'!$X$2:$X$169))*[@[POINTS OVER REPL]]

That gets the job done, I suppose. But it becomes much more difficult to adjust if your league goes to 10 or 14 teams next year, if the budget changes, or if they decide to draft 25 players instead of 24. This also doesn't account for the commonly used rule that each player must cost at least $1.

Instead of jamming all the pieces of this calculation into one formula, I prefer to break things apart into more manageable and easy-to-update pieces. You can already see examples of this on the "Scoring Settings" tab where we have separated out the point value of each scoring category.

Using Cell Shading to Indicate Meaning

As you are building more involved calculations with multiple steps, it is to indicate which cells in your spreadsheets are "input" cells and which ones are "calculated" (formula) cells. I like to denote this by shading the cells a certain color.

Number of Teams:	12
Team Auction Budget:	$ 260
Total League Budget:	$ 3,120

A simple example of this is determining your "League Budget" or the total amount of money to be allocated for player dollar values. For example, if you assume each team has a standard $260 budget, that would be $2,600 for a 10-team league or $3,120 for a 12-team league.

An example of how this will look is shown above. The information shaded blue are "inputs" into the "calculated" cell which is shaded light red.

Color coding in this fashion allows you to easily come back later and know exactly where to make changes. You'll know that you can freely make changes to the blue shaded cells and that you don't need to change the red shaded cells.

Not to mention that all these fancy colors are going to intimidate the guy sitting next to you at the draft table.

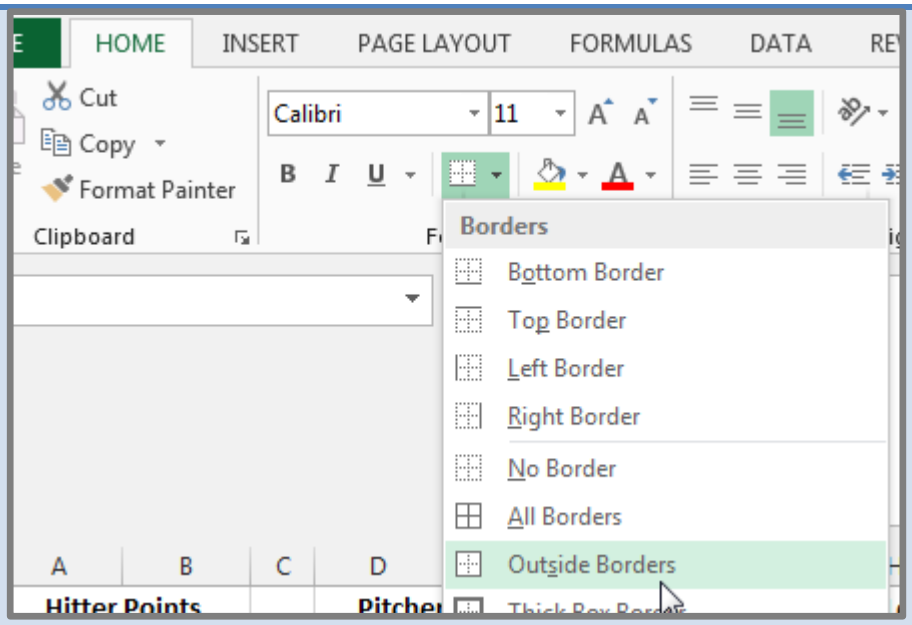
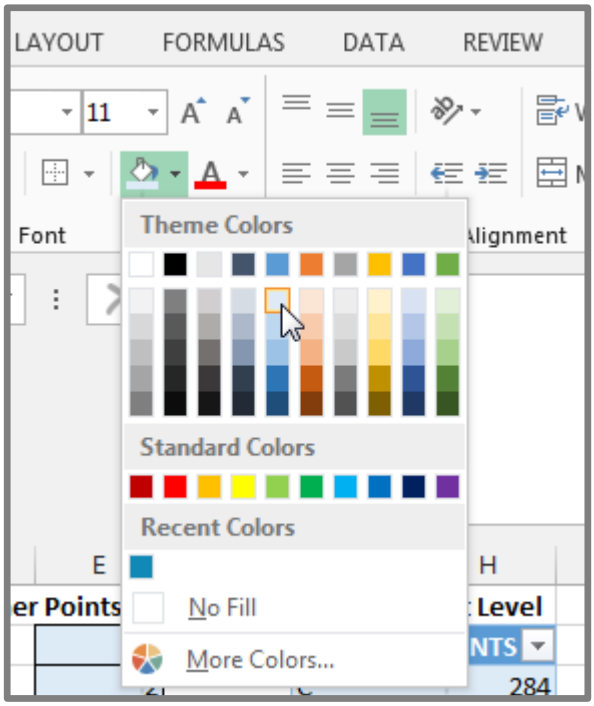
NAMED CELLS (OR NAMED RANGES)

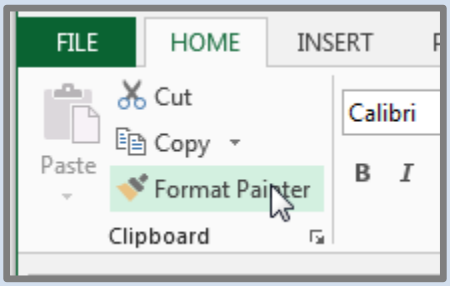
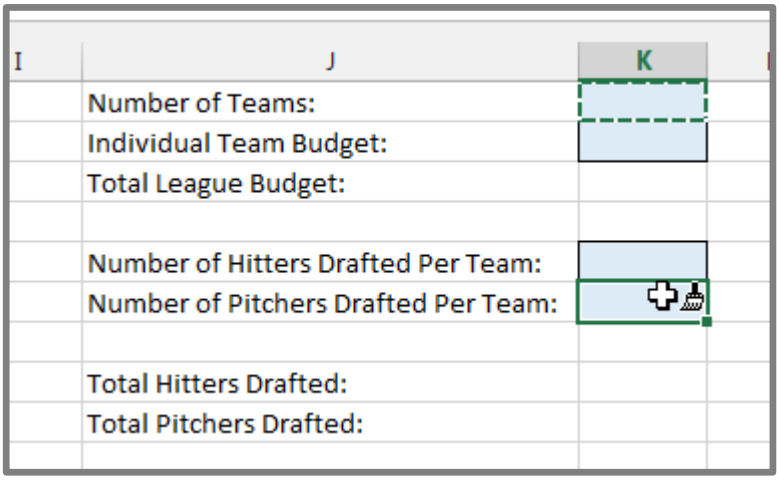
We previously used Named Cells when setting up your league's scoring system in Part 2. We'll use that same concept more to set up the league's dollar value calculation settings.

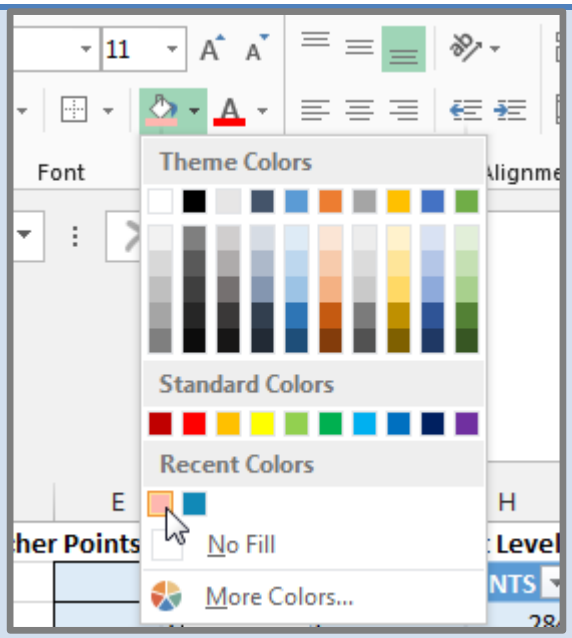
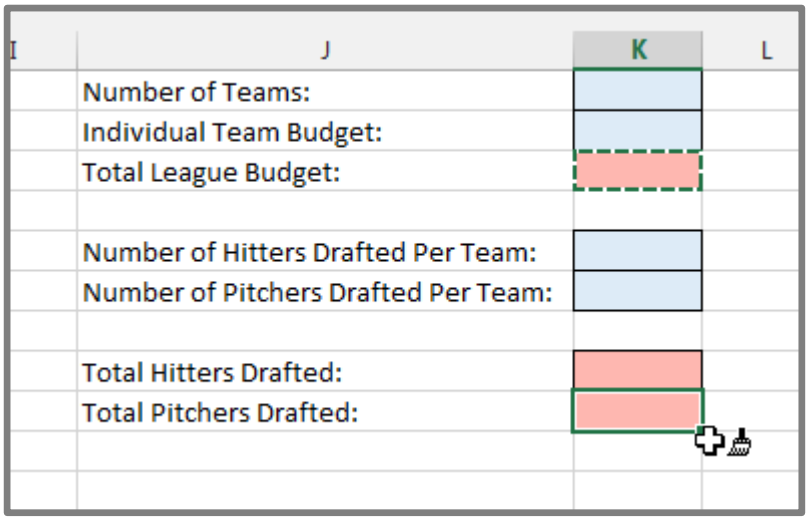
STEP-BY-STEP INSTRUCTIONS

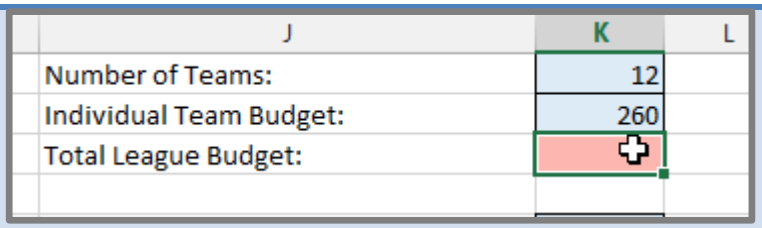
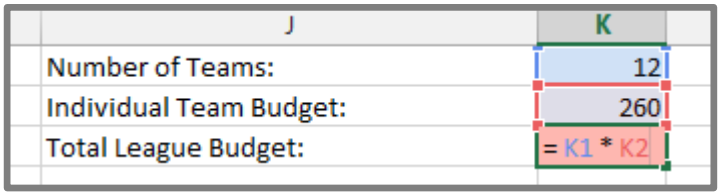
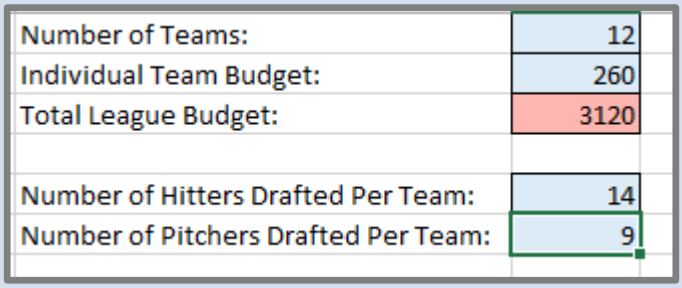
Step	Description
1.	Go to the "Scoring Settings" tab of the spreadsheet.
2.	Begin to fill out column J by entering the following information:
3.	To use the concept of cell shading discussed above, I'll first place a boarder around the cells to be shaded. Click once on the first cell to be formatted (K1) and select the "Borders" drop down menu on the Ribbon. Then choose the "Outside Borders" option.

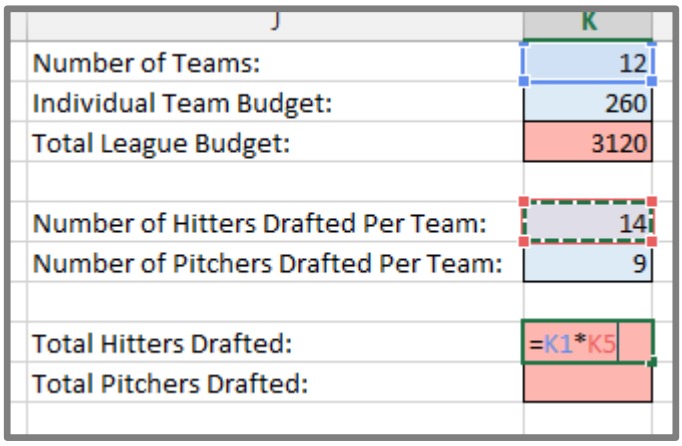
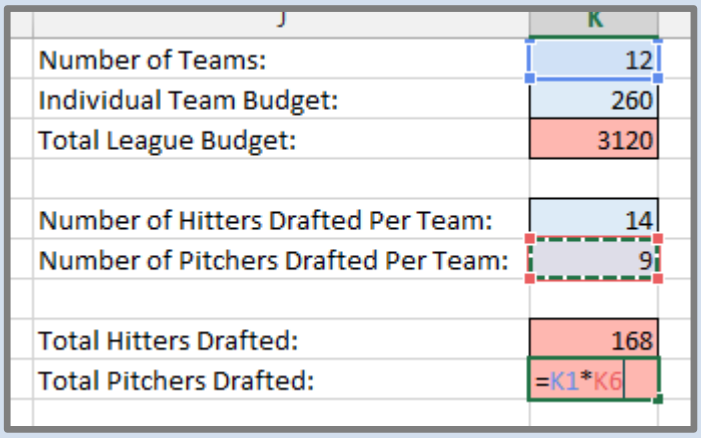
H	I	J	K
ment Level		Number of Teams:	
POINTS		Individual Team Budget:	
284		Total League Budget:	
467			
473		Number of Hitters Drafted Per Team:	
480		Number of Pitchers Drafted Per Team:	
501			
496		Total Hitters Drafted:	
501		Total Pitchers Drafted:	
422			

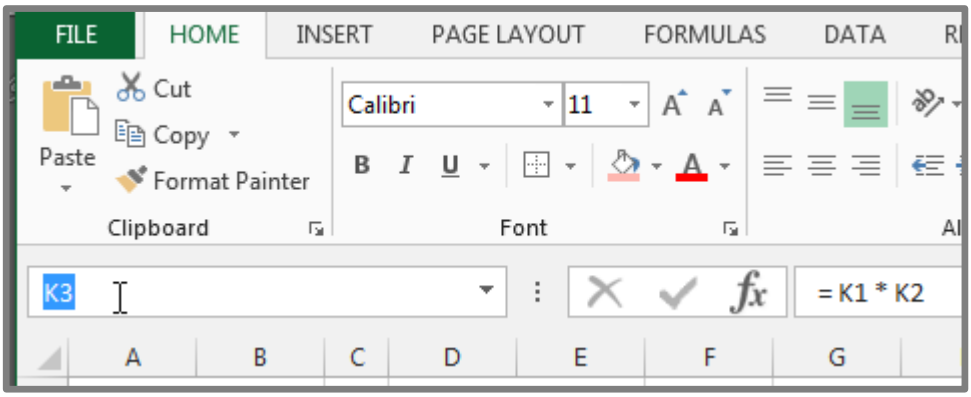
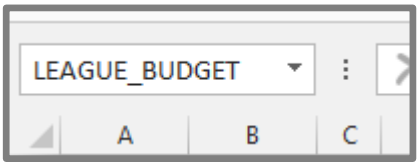
Step	Description
	
4.	This "Number of Teams:" cell will be an input cell that we type "12" or "14" into (or however many teams are actually in your league). While you are still selected on cell K1, click the "Fill Color" drop down arrow and select the same color you used earlier in Part 2 to indicate "input" cells. 
5.	The other input cells will be in cells K2, K5, and K6. To quickly format them the same as cell K1, while you are still selected on cell K1, double-click on the

Step	Description
	"Format Painter" icon. While "Format Painter" is activated like this, any cell you click on will format to the same way as cell K1. 
6.	While "Format Painter" is active (you can tell it's active when you see the paint brush next to your cursor and rotating dashed line around cell K1), simply click once on cells K2, K5, and K6.After you are done using "Format Painter", hit the ESC key to exit. 
7.	Cell K3 will be a "calculated cell". Follow steps 3 and 4 above to give the cell a border and assign it a fill color. Make sure to choose a different color than you chose for your "input cells".

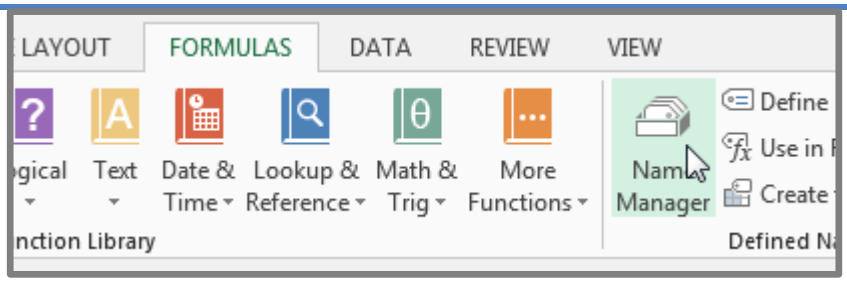
Step	Description
	
8.	While you have cell K3 selected, double-click on the "Format Painter" and then click once on cells K8 and K9. Hit the ESC key afterwards to exit "Format Painter". 
9.	Let's now enter in some of this information. Type the number of teams in your league into cell K1 (e.g. 12).Enter each team's budget into cell K2 (e.g. $260).

Step	Description
	
10.	To calculate the total amount of money your league has for spending on players, enter the following formula in cell K3 and then hit Enter: **= K1 * K2** 
11.	Enter the number of hitters each team will draft in cell K5 (e.g. 14) and the number of pitchers each team will draft in cell K6 (e.g. 9). If your league has bench spots available, using opposing manager tendencies from previous seasons make an estimate of how those bench spots will be used. Then allocate those bench spots to the "Number of Hitters Drafted Per Team" and the "Number of Pitchers Drafted Per Team" fields. For example, if your league calls for 14 starting hitters, 9 starting pitchers, and 5 bench spots, that would be 28 total players. If you think most teams will end up using the bench for 3 hitters and 2 more pitches, enter 17 for hitters and 11 for pitchers. Just make sure the total hitters and pitchers is equal to the number of players each team can draft. 

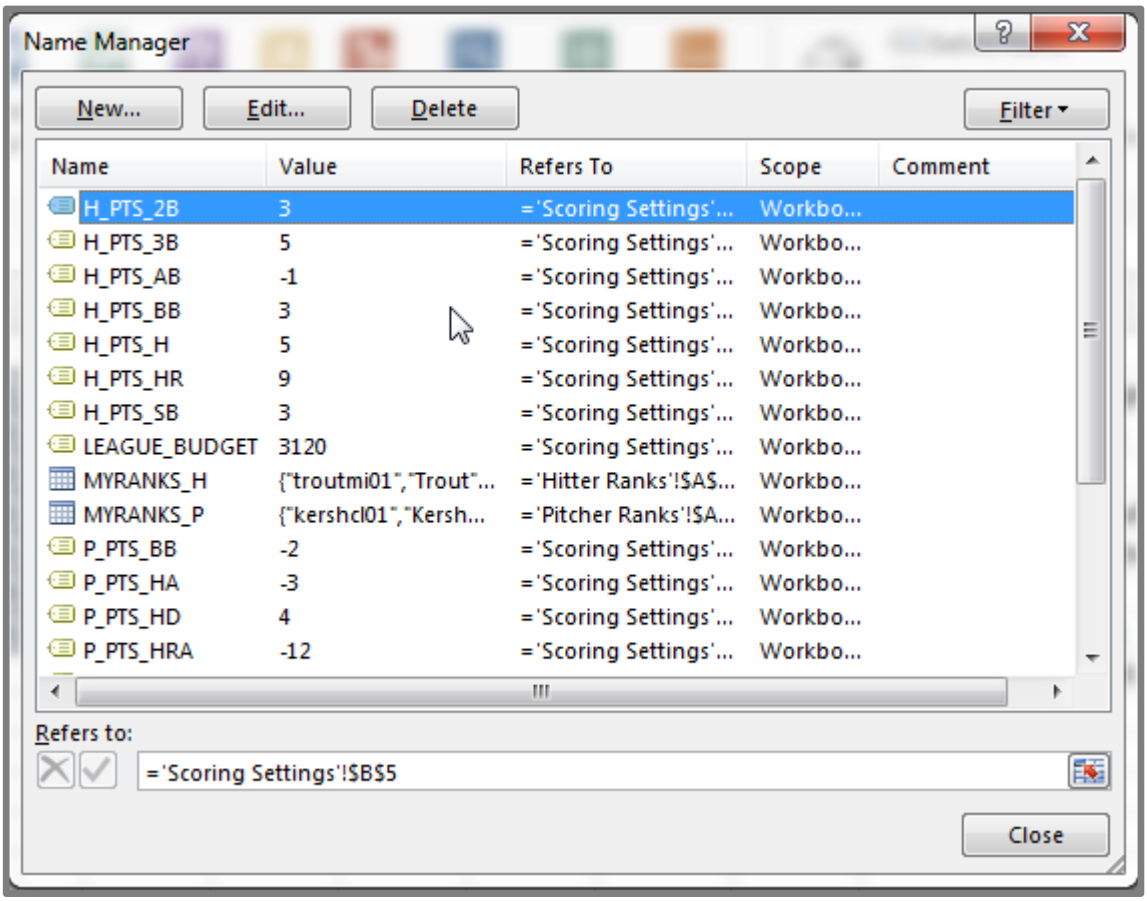
Step	Description
12.	To calculate the "Total Hitters Drafted", enter the following formula in cell K8 and hit Enter: **= K1 * K5** 
13.	To calculate the "Total Pitchers Drafted", enter the following formula in cell K9 and hit Enter: **= K1 * K6** 
14.	In order to convert out point values into dollar values we will need to reference and use the following pieces of information in future formulas: • Total League Budget (cell K2) • Total Hitters Drafted (cell K8) • Total Pitchers Drafted (cell K9)

Step	Description
	Like we did earlier in Part 2 with the League Scoring Settings, to make these cells easier to reuse in formulas, we will set them up as "Named Ranges". To do this, first click on cell K3, "Total League Budget". Feel free to use our same method of naming this cell. But a faster way to name cells is to use the "Name Box". It's the area to the left of the formula bar and below the "File" and "Home" tabs of the ribbon. While you are selected on cell K3 the "Name Box" should display "K3".  Use the "Define Name" button (old way of naming cells) or the "Name Box" to name cell K3 "League_Budget". 
15.	Repeat step 14 giving the following names: • "**TOTAL_HITTERS_DRAFTED**" - cell K8 • "**TOTAL PITCHERS DRAFTED**" - cell K9
16.	Remember, if you need to edit a Named Range or just want to double check the list of names you have created, just click on the "Formulas" tab and then the "Name Manager".

Step	Description



Once you're in "Name Manager" you will see the list of all names and all tables. Select the item you want to rename or change and click "Edit...".



WRAP UP

You have just completed the setup of your league's dollar settings. This ground work will help us convert projected point totals into dollar values.

DO YOU HAVE ANY QUESTIONS?

Do you have questions about Part 7? Or want to see what others have asked? Check here.

EXAMPLE EXCEL FILE

Download the example spreadsheet illustrating the work done in this part here. Or you can download all spreadsheets for the entire book here.

PART 8 – CONVERTING POINTS INTO DOLLAR VALUES

INTRODUCTION

If you think about what information is necessary to value a player, we need these things:

- The number of players that will be drafted
- The amount of money available for spending
- A measure of how good each player is

In the first six parts of this book we calculated projected points for all hitters and pitchers. That is our measure of how good each player is. In our last part of this book we determined the first two bullet points.

We can now begin to convert all this information into a dollar value for each player.

CALCULATING VALUES

In the example file I've been using to demonstrate this process, we know that we have $3,120 ($260 for 12 teams) to allocate to 276 players (168 hitters and 108 pitchers).

We haven't calculated this yet, but let's assume that these 276 players are projected for a total of 37,002 points over replacement level (24,188 for hitters and 12,814 for pitchers).

You might be thinking that we could just divide the $3,120 by the 37,002 points to find out that each point over replacement level is worth $0.0843. Under that calculation a player like Mike Trout, projected for 508 points over replacement level, would be worth $42.83.

That's a good line of thinking, but we need to account for one more rule. Most leagues stipulate that a minimum bid on a player is $1.

We can easily adjust for this. Instead of assuming we have $3,120 to divide against the 37,002 points, we'll first take out a $1 minimum for each of the 276 players. This leaves us with $2,844 for the same 37,002 points.

Adjusting for these new figures, each point over replacement level is worth $0.07686. Our new value formula for any player is:

= Points_Over_Replacement_Level * $0.07686 + $1

EXCEL FUNCTIONS AND CONCEPTS IN THIS PART

RANK OR RANK.EQ

These formulas are essentially the same; however, RANK was been discontinued in Excel 2010 and was replaced by RANK.EQ. If you are using Excel 2007 or earlier, you must use RANK. If you're using Excel 2010 or later, either one should work.

These formulas will interpret a list of numbers and return the ranking of a specified item in the list. We can use this to analyze the entire list of player points and give us a ranking for each player (e.g. Mike Trout is #1).

The formulas require two inputs:

RANK(Number, Ref)

RANK.EQ(Number, Ref)

1. **Number** – This is the specific number you want ranked. If your goal is to figure out Mike Trout's ranking in the list of all player projected points, you would select Mike Trout's projected total.
2. **Ref** – This is the range of data, or the complete list of data, to calculate the ranking from. Continuing with the Trout example, you would pick the entire column of hitter projected points here.

IF

The IF formula checks to see if a condition you specify is met. If the condition is met, the formula will return an answer of your choosing. If the condition is not met, the formula will return a different answer of your choosing.

Recall from our examples that we will be drafting 168 hitters. We will use this formula to treat the 168 draftable hitters one way and anyone not in the top 168 another way.

This formula requires three inputs:

IF (Logical_test, Value_if_true, Value_if_false)

1. **Logical_test** – This must be a statement that can be determined to be true or false. An example might be "Is this player ranked in the top 168 players?".
2. **Value_if_true** – If the Logical_test is determined to be true, this is the value returned by the formula.
3. **Value_if_false** – If the Logical_test is determined to be false, this is the value returned by the formula.

SUM

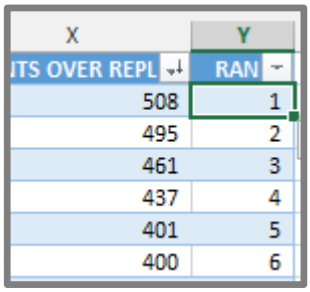
The SUM formula will calculate the total of a range of cells. For example, we can calculate the combined amount of projected points in the "POINTS OVER REPL" column or the projected number of Home Runs by using "SUM" on the "HR" column.

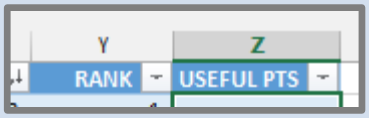
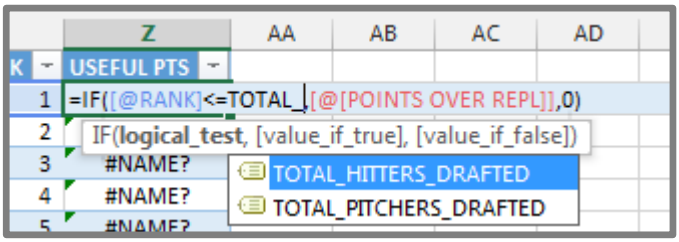
This formula requires just one input:

SUM (Range)

Range – This is the range of cells to include in the calculation.

STEP-BY-STEP INSTRUCTIONS

Step	Description
1.	Our first task in this segment is to identify who the top 168 hitters and the top 108 pitchers are (keep in mind the 168/108 numbers are specific to my example, if your league drafts 182 hitters and 132 pitchers, use those numbers in your spreadsheet). We need this to calculate the total points that we expect to be drafted. We will use that expected point total to calculate our "Dollar Value per Point" that we can then use to calculate a projected value for each player. Go to the "Hitter Ranks" tab of your spreadsheet. Start a new column by typing "RANK" just to the right of your "POINTS OVER REPL" column (in my example scenario I typed this into cell Y1).
2.	We will now use the RANK formula to determine if a player falls in the top 168 hitters. To do this, enter the following formula below the "RANK" header we just created (cell Y2 in my example): **=RANK([@[POINTS OVER REPL]],[POINTS OVER REPL])** This is instructing Excel to rank each player's "POINTS OVER REPL" (the one with the "@" symbol means look at this player's points) in the entire list of the "POINTS OVER REPL" column (that's the second input into the formula, after the comma). After you hit Enter to apply the formula you should see that each player is now ranked. 
3.	Remember that we are trying to determine the POINTS OVER REPL for the top 168 hitters and top 108 pitchers. If a hitter is in the top 168, we want that player's

Step	Description
	POINTS OVER REPL to be included in a new column that we can easily use to calculate the total POINTS OVER REPL for the whole group of the top 168 hitters. The top 168 hitters will be "useful" or "draftable". Type "USEFUL PTS" into cell Z1 to start this new column. 
4.	We'll now use the IF formula to determine if an individual player is within the draftable pool of players (the top 168). If a player is draftable, we want their POINTS OVER REPL to carry over into column Z. If a player is not draftable, we do not want their POINTS OVER REPL included in the column, we just want a zero to display for those players. To accomplish this, enter the following formula in cell Z2: **=IF([@RANK]<=TOTAL_HITTERS_DRAFTED, [@[POINTS OVER REPL]],0)**  We created the "TOTAL_HITTERS_DRAFTED" column in Part 7 to calculate the total number of usable or draftable hitters. In plain English, this formula is saying, "If the hitter's rank is 168 or below, give me that player's POINTS OVER REPL. If the hitter's rank is 169 or above, just put a zero."
5.	To verify the formula is working correctly, scroll to the 168th ranked hitter. You should see that all players ranked 169 and higher have 0 points in the USEFUL PTS column.

Step	Description

	PROJ PTS	REPL LEVEL	POINTS OVER REPL	RANK	USEFUL PTS
166	513	496	17	165	17
167	512	496	16	166	16
168	507	496	11	167	11
169	489	480	9	168	9
170	501	501	-	169	-
171	496	496	-	169	-
172	480	480	-	169	-
173	473	473	-	169	-
174	473	473	-	169	-
175	467	467	-	169	-
176	284	284	-	169	-
177	472	473	(1)	176	-

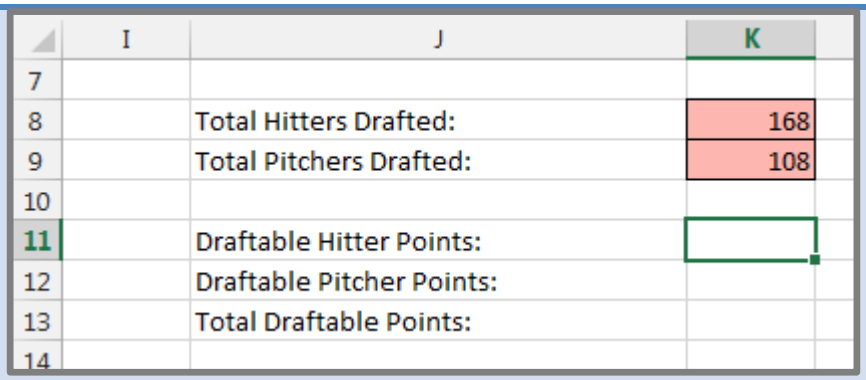
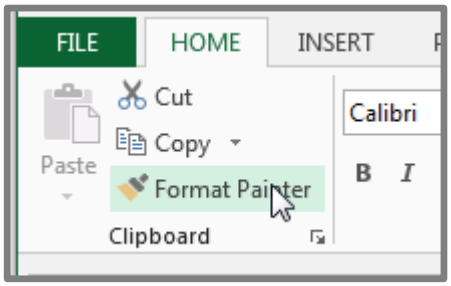
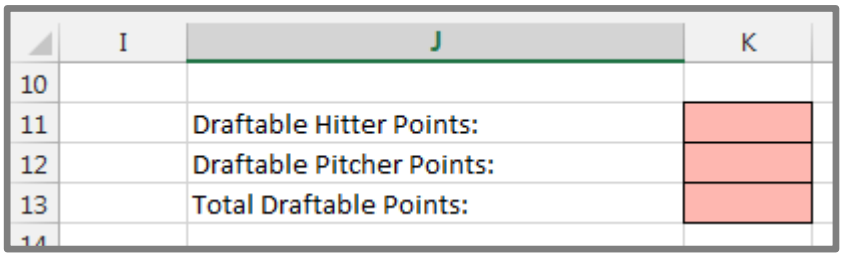
6. Repeat steps 1 through 5 on the "Pitcher Ranks" tab. Everything should be the same except the formula in step 4 changes to become:

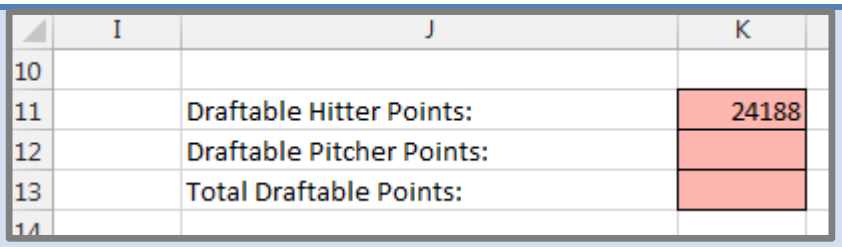
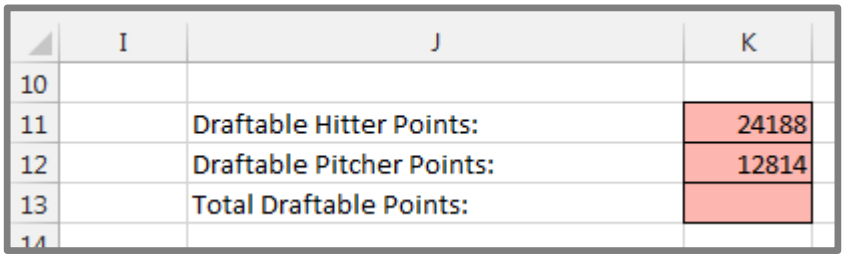
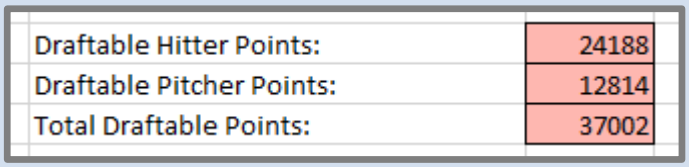
=IF([@RANK]<=TOTAL_PITCHERS_DRAFTED, [@[POINTS OVER REPL]],0)

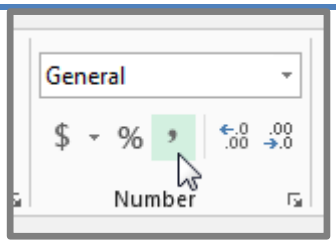
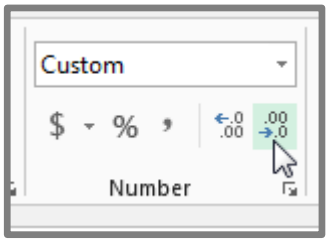
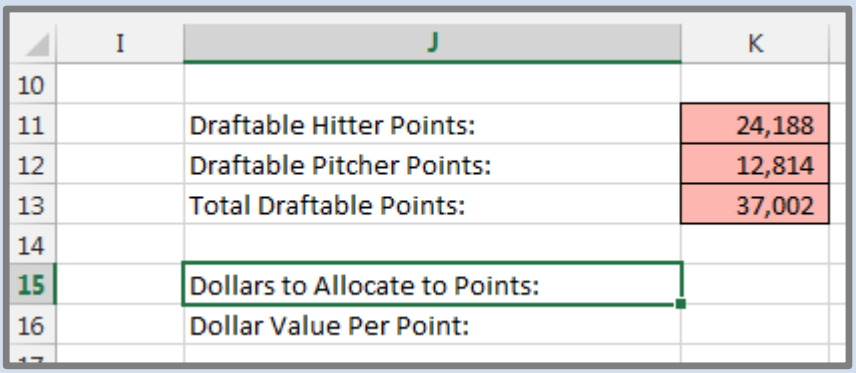
Make sure you perform the review in step 5 to verify your formulas are working properly. The 109th pitcher should show a 0 in the USEFUL PTS column.

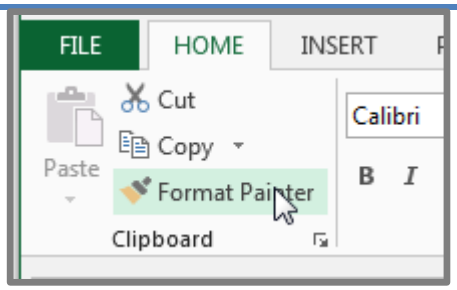
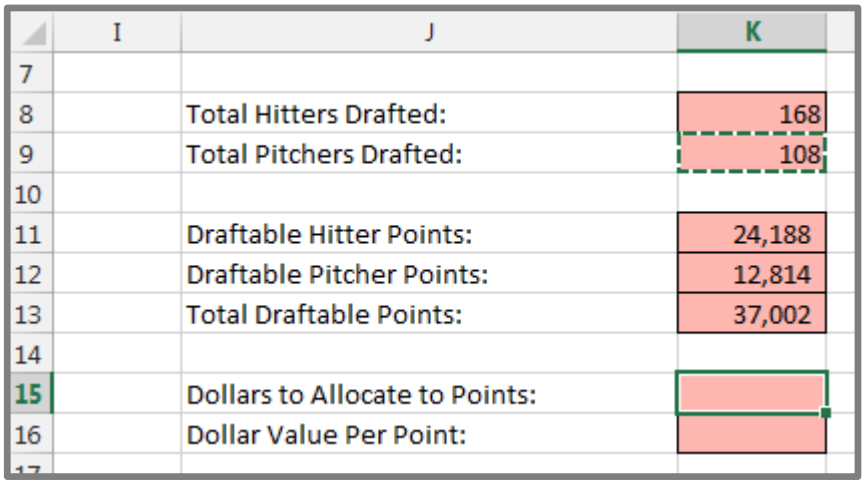
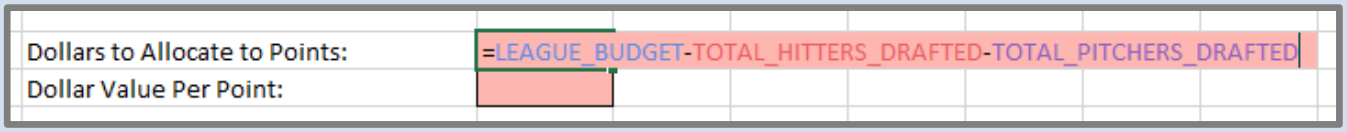
	ERA	WHIP	PROJ PTS	REPL L	POINT	RANK	USEFUL PTS
106	4.09	1.29	427	422	5	105	5
107	4.22	1.32	424	422	2	106	2
108	2.77	1.15	424	422	2	106	2
109	2.63	1.06	423	422	1	108	1
110	2.22	1.00	422	422	0	109	-
111	3.92	1.23	419	422	-3	110	-
112	2.91	1.15	417	422	-5	111	-
113	3.90	1.24	411	422	-11	112	-

7. Now return to the "Scoring Settings" tab. Enter the descriptions shown in the image below in cells J11 through J13.

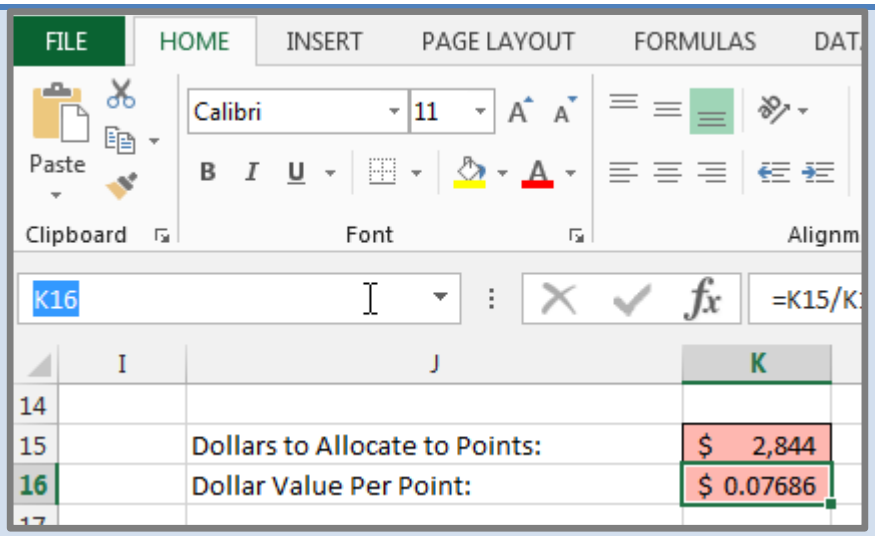
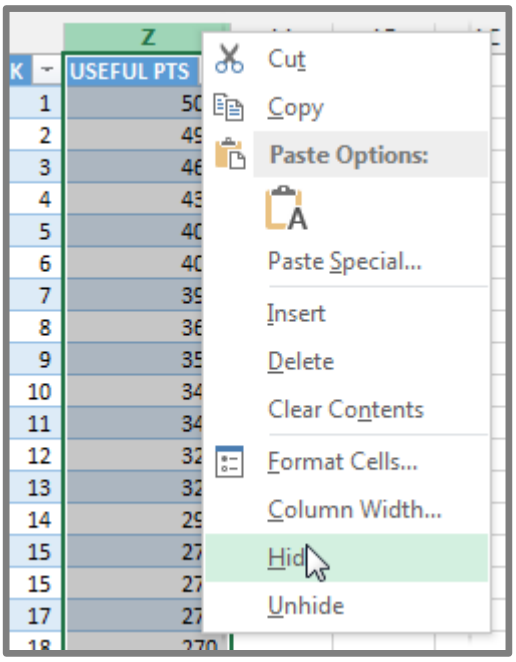
Step	Description
	
8.	These will be calculated cells. To format them consistently with our other calculated cells, select cell K9. While K9 is selected, double-click on the Format Painter (on the Home tab of the ribbon).  Then click once on cells K11, K12, and K13. Hit the ESC key afterwards to exit the Format Painter. 
9.	To calculate the "Draftable Hitter Points:" amount, enter the following formula in cell K11 and hit Enter: **=SUM(MYRANKS_H[USEFUL PTS])** This formula will calculate the sum of the "USEFUL PTS" column in the "MYRANKS_H" table.

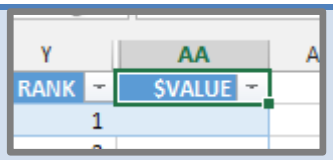
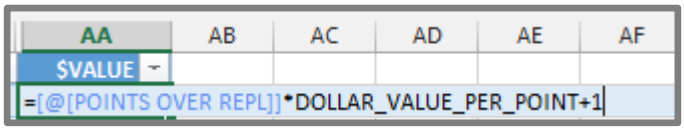
Step	Description
	
10.	To calculate the "Draftable Pitcher Points:" amount, enter the following formula in cell K12 and hit Enter: **=SUM(MYRANKS_P[USEFUL PTS])** This formula will calculate the sum of the "USEFUL PTS" column in the "MYRANKS_P" table. 
11.	The "Total Draftable Points:" cell will simply be the sum of "Draftable Hitter Points" and "Draftable Pitcher Points". Enter the following formula in cell K13 and hit Enter: **=K11+K12** 
12.	These three cell should have a comma in the number. Your example may be slightly different. But if you are having formatting issues with the numbers, use the number format buttons in Excel to get your desired appearance.

Step	Description
	 I chose the comma and then hit the decrease decimal button two times to remove the decimal places. 
13.	We are now ready to calculate just how much each point will be worth in our value formula. Enter the descriptions shown in the image below in cells J15 and J16. 
14.	These two new amounts will also be calculated cells. To format them consistently with our other calculated cells, select cell K9 again. While K9 is selected, double-click on the Format Painter (on the Home tab of the ribbon).

Step	Description
	 Then click once on cells K15 and K16. Hit the ESC key afterwards to exit the Format Painter.  I J K 7 8 Total Hitters Drafted: 168 9 Total Pitchers Drafted: 108 10 11 Draftable Hitter Points: 24,188 12 Draftable Pitcher Points: 12,814 13 Total Draftable Points: 37,002 14 15 Dollars to Allocate to Points: 16 Dollar Value Per Point:
15.	Recall from the beginning of this section that we must set aside a $1 base value for each player. This money must be removed from the pool we will use to calculate "Dollar Value Per Point". To do this, enter the following formula in cell K15 and hit Enter: **=LEAGUE_BUDGET-TOTAL_HITTERS_DRAFTED-TOTAL_PITCHERS_DRAFTED**  Dollars to Allocate to Points: =LEAGUE_BUDGET-TOTAL_HITTERS_DRAFTED-TOTAL_PITCHERS_DRAFTED Dollar Value Per Point: This is essentially K3 minus K8 minus K9 but we previously set those cells up as Named Cells. I find it easier to make sense of formulas later on if I use their names. I won't give a name to every cell on this tab, but if I think I'll refer to a tab more than once or if I'll refer to it on another tab, I try to use names.

Step	Description
	Remember, your projected points will surely differ from mine based on the projections you're using and your league's scoring format. I J K 7 8 Total Hitters Drafted: 168 9 Total Pitchers Drafted: 108 10 11 Draftable Hitter Points: 24,188 12 Draftable Pitcher Points: 12,814 13 Total Draftable Points: 37,002 14 15 Dollars to Allocate to Points: $ 2,844 16 Dollar Value Per Point: 17 Again, use the number formatting buttons to give this value a dollar sign and remove the decimal places.
16.	Now it's time to calculate the dollar value of each point over replacement level! To calculate this, enter the following formula in cell K16 and hit Enter: **=K15/K13** Dollars to Allocate to Points: $ 2,844 Dollar Value Per Point: $ 0.07686 Because my calculation results in so many decimals, I formatted this cell to have a dollar sign and then I increased the decimals several places.
17.	We will reuse this "Dollar Value Per Point" amount on the "Hitter Ranks" and "Pitcher Ranks" to calculate each player's dollar value, so it will be beneficial to set this up as another "Named Cell". Click once on cell K16 to select it. Then click in the "Name Box" (this is the faster method of naming a cell discussed in Part 7).Type in the name for this cell as "DOLLAR_VALUE_PER_POINT" and hit Enter.

Step	Description
	
18.	Now return to the "Hitter Ranks" tab. While the "USEFUL PTS" column is necessary to calculate dollar values, it is of little value to us to actually look at the information in the column after it's been set up. To hide this column, right-click on the "Z" column header and select "Hide" from the right-click menu. 
19.	Start a new column in the table by typing "$VALUE" into cell AA1.

Step	Description
	
20.	It's finally time to calculate each player's dollar value! To calculate this, enter the following formula in cell AA2 and hit Enter: **=[@[POINTS OVER REPL]]*DOLLAR_VALUE_PER_POINT+1**  This is the formula we discussed at the beginning of this entire Part. We are taking each player's projected points over replacement level (NOT USEFUL POINTS!) and multiplying it by the named cell "DOLLAR_VALUE_PER_POINT" that we just created. We then add the $1 base price we much have for each player. You should now see dollar values populating for each player (you will probably have to use the currency format button on the toolbar to format the numbers with dollar signs and two decimal places). X Y AA OVER REPL RANK $VALUE 508 1 $ 40.05 495 2 $ 39.05 461 3 $ 36.43 437 4 $ 34.59 401 5 $ 31.82 400 6 $ 31.74 397 7 $ 31.51
21.	Repeat steps 18, 19, and 20 on the "Pitcher Ranks" tab. The new "$VALUE" column is column X in my example file.

Step	Description

U	V	X
POINT	RANK	$VALUE
472	1	$ 37.28
380	2	$ 30.21
375	3	$ 29.82
365	4	$ 29.05
364	5	$ 28.98
344	6	$ 27.44

22. The final task in this process is to perform a check of your dollar values at this time. This is VERY IMPORTANT. We can very easily tell if a mistake was made somewhere along the way.

We will check this by making sure the combined dollar value of all draftable players is the same as the "Total League Budget" on the "Scoring Settings" tab.

Click on the first dollar value of the "Hitter Ranks" tab in cell AA2. Then click and drag to select all the items in the $VALUE column until you get to your last draftable hitter (in my league it's hitter #168 or row #169).

You should see the $VALUE amounts approach $1 as you get to the replacement level players.

	PROJ PTS	REPL LEVEL	POINTS OVER REPL	RANK	$VALUE
163	494	473	21	161	$ 2.61
164	516	496	20	163	$ 2.54
165	499	480	19	164	$ 2.46
166	513	496	17	165	$ 2.31
167	512	496	16	166	$ 2.23
168	507	496	11	167	$ 1.85
169	489	480	9	168	$ 1.69
170	501	501	-	169	$ 1.00
171	496	496	-	169	$ 1.00
172	480	480	-	169	$ 1.00
173	473	473	-	169	$ 1.00

Then look at the "Sum" in the Excel status bar (along the bottom of Excel).

AVERAGE: $12.07 COUNT: 168 SUM: $2,027.11

Jot this number down.

23. Now go to the "Pitcher Ranks" tab and repeat step 22. For my pitchers I'm capturing the sum of the top 108 pitchers (up to row #109 in my spreadsheet).

Step	Description

	ERA	WHIP	PROJ PTS	REPL L	POINT	RANK	$VALUE
102	2.77	1.11	433	422	11	101	$ 1.85
103	4.06	1.33	431	422	9	102	$ 1.69
104	4.13	1.28	431	422	9	102	$ 1.69
105	4.16	1.28	428	422	6	104	$ 1.46
106	4.09	1.29	427	422	5	105	$ 1.38
107	4.22	1.32	424	422	2	106	$ 1.15
108	2.77	1.15	424	422	2	106	$ 1.15
109	2.63	1.06	423	422	1	108	$ 1.08
110	2.22	1.00	422	422	0	109	$ 1.00
111	3.92	1.23	419	422	-3	110	$ 0.77

AVERAGE: $10.12 COUNT: 108 SUM: $1,092.89

24. Now add your total draftable hitter dollar value to the total draftable pitcher dollar values:

Draftable Hitter Dollar Value: $2,027.11

Draftable Pitcher Dollar Value: $1,092.89

Total: $3,120.00

This agrees exactly to my "Total League Budget" so I can be confident that I've done things correctly.

J	K
Number of Teams:	12
Individual Team Budget:	260
Total League Budget:	$ 3,120

WRAP UP

You did it! You have taken a blank Excel file and converted it into a powerful tool to give you an advantage in your leagues for seasons to come. You can use this to make decisions about free agent acquisitions, trade offers, and more. This spreadsheet you just created contains projections, rankings, position scarcity adjustments, and dollar value conversions. How many people in your league are coming to the draft with your level of preparation?

This tool is all formula based and will update in real-time. That's fancy technology speak for saying you can edit or paste in new projection data and with a few tweaks (e.g. you probably should look at replacement level again after making significant adjustments) you will have updated rankings and dollar values.

The next part in the book is not required but is helpful for monitoring in-draft spending trends that could affect dollar values during the draft and for keeper leagues that need to account for price inflation due to kept players heading into the draft.

DISCLAIMER

I may take the phrase "replacement level" too literally. If you think back to part 6 of this book, I suggested you define the replacement level player as the first undrafted player at each position. Using this definition of "replacement level" gives these undrafted players a value of $1, whereas many would argue the last players drafted should be valued at $1.

If you would like for your last players drafted at each position to be valued at $1, move your definition of replacement level up one player to the last player drafted. For example, instead of the 25th catcher you would use the 24th catcher's projected point total as your replacement level catcher.

This small change can cause player dollar values to shift by a couple of dollars for players at the top.

DO YOU HAVE ANY QUESTIONS?

Do you have questions about Part 8? Or want to see what others have asked? Check here.

EXAMPLE EXCEL FILE

Download the example spreadsheet illustrating the work done in this part here. Or you can download all spreadsheets for the entire book here.

PART 9 – INCORPORATING IN-DRAFT AND KEEPER LEAGUE INFLATION

INTRODUCTION

In this section we'll discuss the concept of inflation, both for "in-draft" inflation and for keeper leagues. Then we'll add more calculations to the spreadsheet we've created to incorporate an inflation calculation.

I believe this is the most difficult chapter in the book. Not only do the fantasy baseball concepts, like inflation, become more difficult, but that means the Excel formulas used calculate these things become more complicated as well.

I don't say that to scare you. Only to warn you not to let up yet!

Let's assume you're in an auction draft and you have calculated point values and dollar values customized to the settings of the league. When you're done with your calculations you believe the top players, like Mike Trout and Clayton Kershaw, should go for $35-$40 in the auction. But when the auction rolls round you see something completely different. Those players are going to $45-$50!

Or let's assume another scenario. This time you're in a keeper league where a player can be kept for multiple seasons. Any player that is kept is done so at the price they went for in the previous year's auction plus $5 for each year they are kept. In a league like this it would not be inconceivable that someone could have Mike Trout at $20 or less heading in to the 2015 season.

How do we account for these two scenarios? In one league players are being auctioned for much more than we think they "should" be. This means there will be less money for teams to spend on the remaining players. In the other league players are being kept at significant discounts. This means there will be more money for teams to spend on the remaining players.

RECALCULATING DOLLARS PER POINT

Recall from part 8 that our example 12-team league has a total budget of $3,120. You'll also remember that we calculated the total points over replacement level of draftable hitters and draftable pitchers (37,002 points in my example). We used this league budget and useful points to calculate the price of one point ($0.7686 / point).

This calculation can be modified to include the effects of kept/drafted players by:

1. Reducing the pool of available money (all of the $3,120 is no longer available)

2. Reducing the pool of available useful points (some of the 37,002 points have been drafted)

Once we have revised dollar amounts and a revised pool of useful points, we can reperform our dollar value calculations with these new inputs.

BELOW REPLACEMENT LEVEL PLAYERS

Alright, so we have to develop a way to track how many of the original $3,120 and 37,002 points are still available. Not too difficult. But here's another wrinkle we need to take in to account...

What are the odds that your top 168 hitters will be the same top 168 hitters of everyone else in your league? Just about impossible, right? Some pour soul is going to draft an injured player or pay way too much for a rookie that won't be called up until July.

This presents an interesting challenge because what do we do if someone in the league spends $10 on a player that you have as being outside the pool of useful players?

This is great for you. Not only does this increase the likelihood that you're going to get a better player (because they used up a roster spot on someone you wouldn't even draft), but it also means there is less money you need to compete against for the rest of the auction.

We need to account for this scenario in our dollar value calculations.

The following example wouldn't happen, but it should help illustrate the changes we need to make.

Assume the first two players auctioned off are the 1st and 2nd ranked hitters for $45 and $40, respectively. Then the 3rd player auctioned off is the 175th ranked player on your list. He goes for $5.

To recalculate the dollar value of the remaining players we would figure out how many dollars remain ($3,120 less the $90 spent), how many players are yet to be selected (because we have to allocate at least $1 to each), and how many points are remaining in the top 168 undrafted players. Right?

STOP. All of that is correct except the last part.

Because a player outside of the top 168 was taken, we're no longer looking for the remaining points in the top 168. **We're now looking for the remaining points in the top 167!** Our player pool has just become the top 167 hitters plus the 175th best hitter.

This might sound like a small detail, but this isn't going to happen with just one player. We don't all agree on the top 168 players. Especially the bottom of that list. Opinions differ. I'm willing to bet you'll see 5, 10, or maybe even 15 players taken that are outside of your list. That adds up!

We need to track how many players outside of our "draftable" pool are selected.

EXCEL FUNCTIONS AND CONCEPTS IN PART 9

AND

The AND formula checks to see if each of a series of conditions you specify are met. If ALL of the conditions are met, the formula will return an answer of "TRUE". If even one of the conditions is not met, the formula will return an answer of "FALSE".

Recall from Part 8 that we added a column for "USEFUL PTS" to our "Hitter Ranks" and "Pitcher Ranks" tabs. This was used to calculate the total points over replacement level for draftable players. Previously we set our formula

for "USEFUL PTS" to determine if a player was in the top 168 hitters or top 108 pitchers.

We now need to add another condition to determine "USEFUL PTS", but this time only if the player has not been kept or drafted. Only available players should go into our "USEFUL PTS" amount.

To test for more than one condition, we can use the AND formula. This can accept multiple inputs. Each input must be a logical test.

AND (Logical_test1, Logical_test2, …)

1. **Logical_test1** – This must be a statement that can be determined to be true or false. An example might be "Is this player ranked in the top 168 hitters?".

2. **Logical_test2** – This must be a separate statement that can be determined to be true or false. An example might be "Does this player have a keeper amount associated with him?"

3. The **"…"** in the formula represents the fact that you can continue to add additional logical tests to the formula. Separate each test by a comma.

NESTING FORMULAS

Excel allows you to have one formula act as an input in another formula. Our "USEFULSGP" column added in Parts 8 and 9 utilized the "IF" function, which required a logical test as the first input. This test would return a value of "TRUE" if the test was met and "FALSE" if the condition was not.

You'll note from above that the "AND" function returns a value of "TRUE" if all the conditions are met and "FALSE" if they are not. So the "AND" function can be used as an input as the logical test in the "IF" function. So instead of having one logical test, like this:

= IF (Logical_Test1 , Answer_if_True , Answer_if_False)

We can "nest" the "AND" function into that same formula like this:

= IF (AND (Logical_Test1 , Logical_Test2) , Answer_if_True , Answer_if_False)

COUNT

The COUNT formula counts the number of cells in a given range that contain numeric values. It's fairly straight forward to use:

= COUNT(RANGE)

For example, the formula =COUNT(Z2:Z6) in the image below would return a value of 4 because only four of the five player had been drafted in this scenario.

	A	B	C	D	E	Z
1	PLAYERID	LNAM	FNAM	TEAM	POS	$ACTUAL
2	troutmi01	Trout	Mike	LAA	OF	45.00
3	cabremi01	Cabrera	Miguel	DET	3B	40.00
4	braunry02	Braun	Ryan	MIL	OF	
5	pujolal01	Pujols	Albert	LAA	1B	20.00
6	stantmi03	Stanton	Giancarl	MIA	OF	30.00

COUNTIFS

The COUNTIFS formula is similar to COUNT but it only counts the numeric values if other conditions are met. We are going to use this formula to determine how many players below replacement level have been drafted. I'll explain more about why in a bit, but we will use COUNTIFS to count any player that:

- Was drafted (or has an actual drafted dollar value assigned to them)
- And their RANK is below 168 (in my example of a league with 168 hitters)

The inputs into the COUNTIFS formula are:

= COUNTIFS (Criteria_range1, Criteria1, Criteria_range2, Criteria2, …)

1. **Criteria_range1** – Range of cells you want to evaluate to see if they meet the terms specified in Criteria1

2. **Criteria1** – A logical condition to apply against Criteria_range1 (e.g. “>0”)

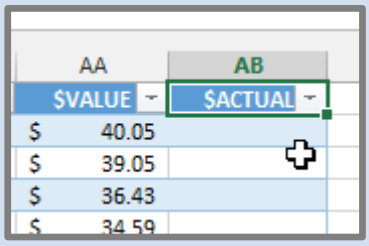
3. **Criteria_range2** – Range of cells you want to evaluate to see if they meet the terms specified in Criteria2

4. **Criteria2** - A logical condition to apply against Criteria_range2 (e.g. “>0”)

5. The **“…”**signifies that you can continue to add more sets of “Criteria_range” and “Criteria” pairs.

Excel will count the number of times ALL of the criteria are met. For the example mentioned above we will be asking to count players with a drafted/actual dollar value AND players whose rank is below 168. Players in our spreadsheet will only be counted if they meet BOTH of those criteria.

STEP-BY-STEP INSTRUCTIONS

Step	Description
1.	Go to the “Hitter Ranks” tab of your spreadsheet. Click your mouse to select the first open cell to the right of the “$VALUE” column (cell AB1 in my example). Type “$ACTUAL” here as the column header.  This new column will be used to enter in keeper values or the actual auction price a player goes for during the draft.

Step	Description
2.	Click your mouse to select the first open cell to the right of the "$ACTUAL" column you just created (cell AC1 in my example). Type "REMAIN PTS OVER REPL" here as the column header. AA: $VALUE AB: $ACTUAL AC: REMAIN PTS OVER REPL The "REMAIN PTS OVER REPL" column will be used to determine a running total of the useful hitter points remaining to be drafted (e.g. players in the top 168 hitters that are still available). As soon as a player is drafted, the player's points will be removed from the pool of remaining points. This will immediately update the dollar value of the remaining points.
3.	Click your mouse to select the first open cell to the right of the "REMAIN PTS OVER REPL" column you just created (cell AD1 in my example). Type "$INFLATE" here as the column header. AB: $ACTUAL AC: REMAIN PTS OVER REPL AD: $INFLATE The "$INFLATE" column will be used to calculate the updated price for each player and will immediately include the effect of any inflation.
4.	Repeat steps 1 through 3 on the "Pitcher Ranks" tab of your spreadsheet. Here's where the new columns were located in my example spreadsheet: • $ACTUAL – Column Y • REMAIN PTS OVER REPL – Column Z • $INFLATE – Column AA X: $VALUE — $ 37.28 Y: $ACTUAL — $ 30.21 Z: REMAIN PTS AA: $INFLATE $ 29.82
5.	Return to the "Scoring Settings" tab of your spreadsheet. We will now add 11 new calculated fields to this tab. Many of them mirror the calculations we

Step	Description
	already created for the normal dollar value calculations, but we must now add new formulas to determine inflated prices. Enter the following descriptions in cells M2 through M16 (see image below):

	J	K	L	M
1	Number of Teams:	12		
2	Individual Team Budget:	260		Actual Value of Drafted Hitters:
3	Total League Budget:	$ 3,120		Actual Value of Drafted Pitchers:
4				
5	Number of Hitters Drafted Per Team:	14		Hitters Below Repl. Level Drafted:
6	Number of Pitchers Drafted Per Team:	9		Pitchers Below Repl. Level Drafted:
7				
8	Total Hitters Drafted:	168		Remaining Hitters to be Drafted:
9	Total Pitchers Drafted:	108		Remaining Pitchers to be Drafted:
10				
11	Draftable Hitter Points:	24,188		Remaining Draftable Hitter Points:
12	Draftable Pitcher Points:	12,814		Remaining Draftable Pitcher Points:
13	Total Draftable Points:	37,002		Total Remaining Draftable Points:
14				
15	Dollars to Allocate to Points:	$ 2,844		Remaining Dollars to Allocate to Points:
16	Dollar Value Per Point:	$ 0.07686		Remaining Dollar Value Per Point:

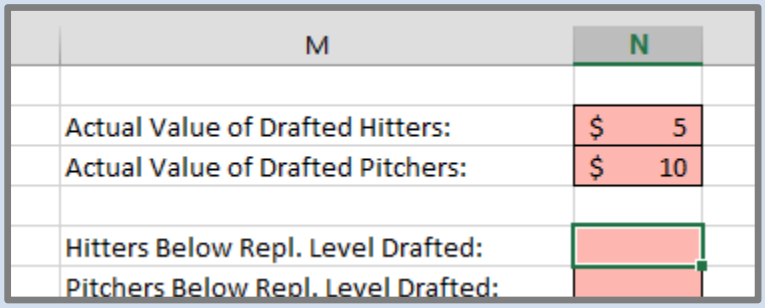
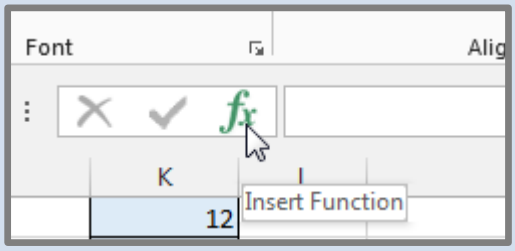
6. To format these:

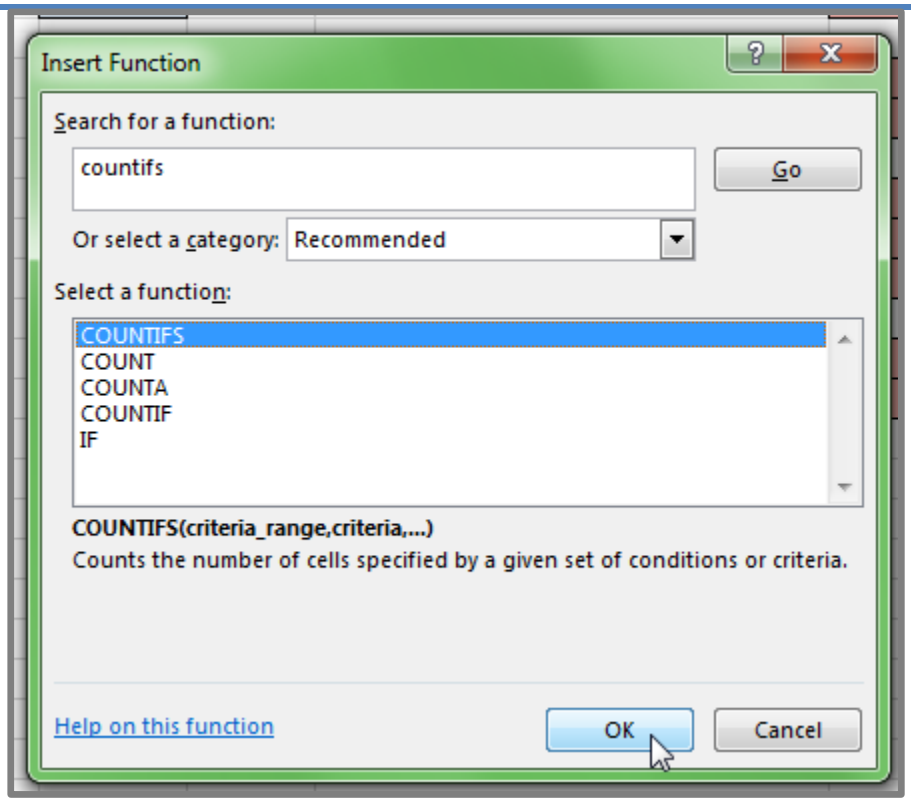
- Select the "Total League Budget" dollar amount in cell K3 and then double-click the Format Painter (on the Home tab of the ribbon). Then click once on cells N2, N3, and N15 (the cells next to "Actual Value of Drafted Hitters", "Actual Value of Drafted Pitchers", and "Remaining Dollars to Allocate to Points"). Hit the ESC key to exit Format Painter.

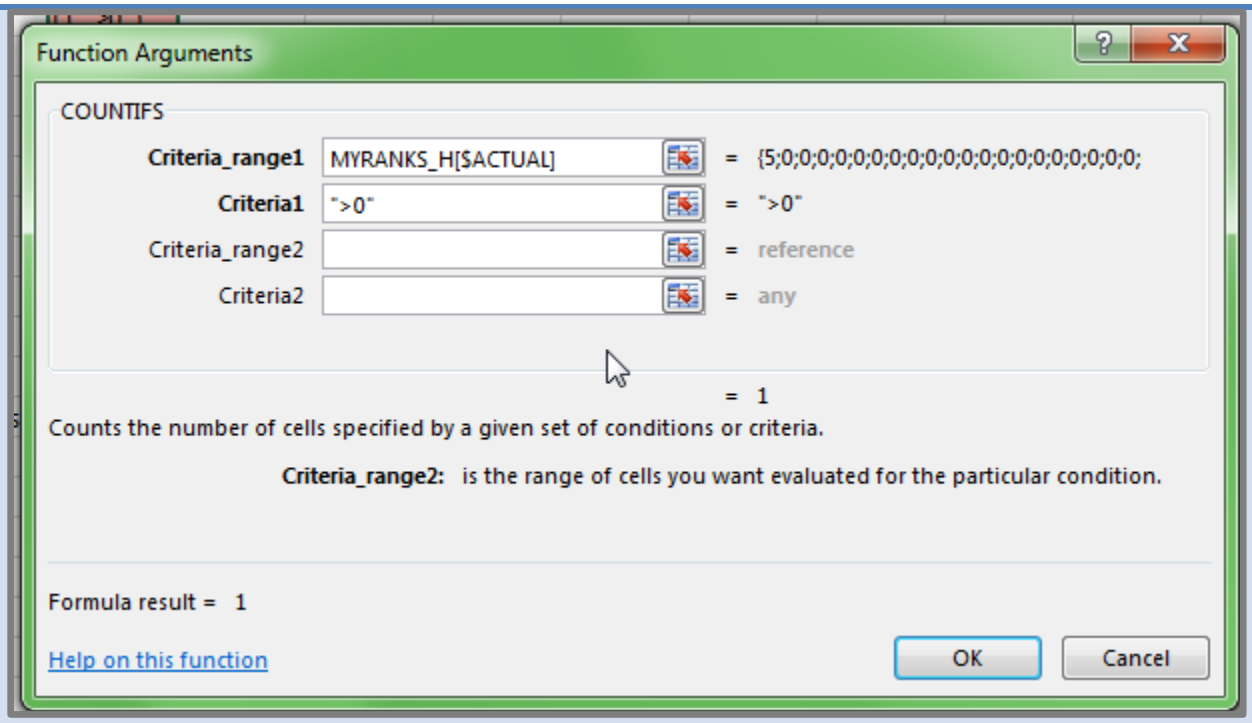
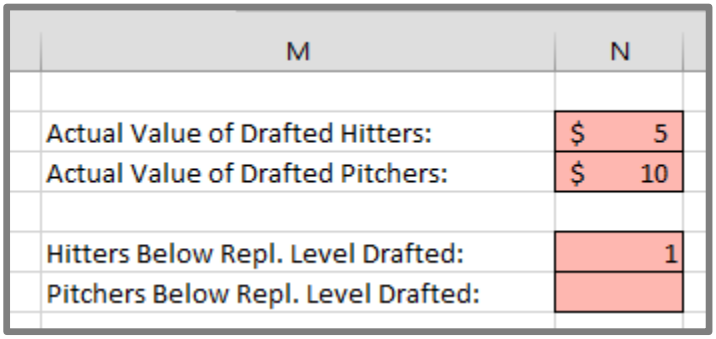
- Select the "Total Hitters Drafted" number in cell K8 and then double-click the Format Painter. Then click once on cells N5, N6, N8, N9, N11, N12, and N13 (this should just leave N16, "Remaining Dollar Value Per Point", unformatted). Hit the ESC key to exit Format Painter.

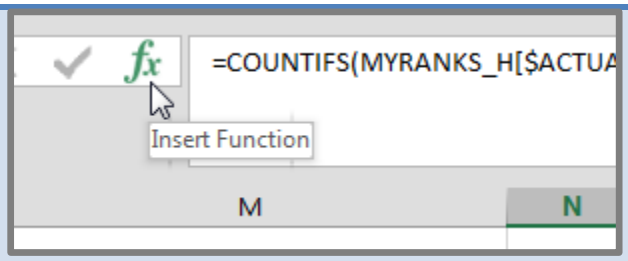
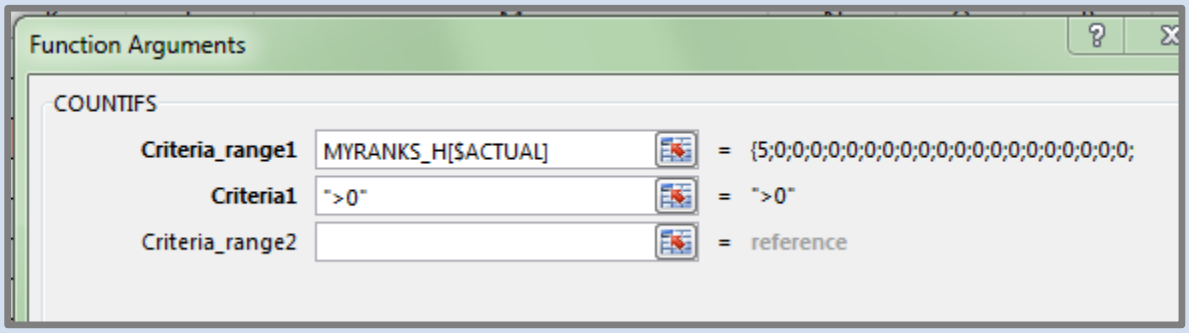
- Finally, select the "Dollar Value Per Point" amount in cell K16 and click once on the Format Painter. Then click once on cell N16.

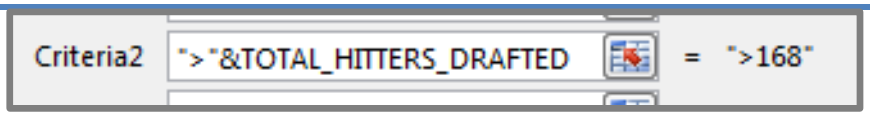
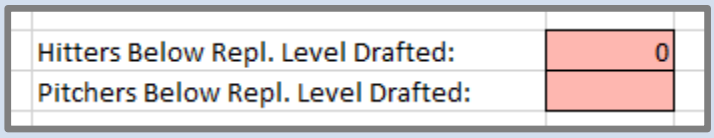
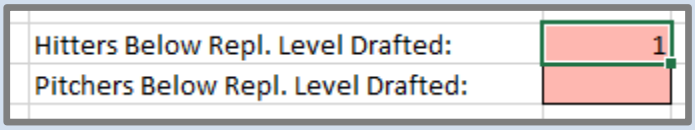
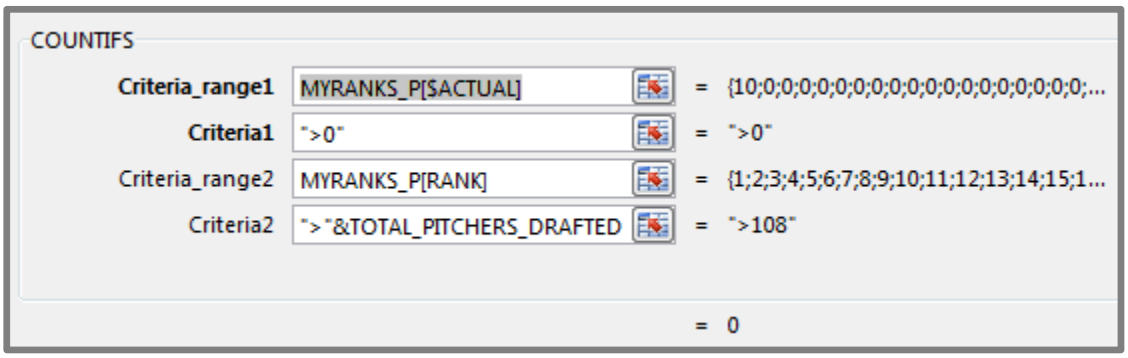
Step	Description
7.	We will now start to calculate some of these fields based on information on the "Hitter Ranks" and "Pitcher Ranks" tabs. The "Actual Value of Drafted Hitters" field will be used to calculate everything spent (through keepers or during the draft) on hitters. We need this to determine how much league money is left to spend. To calculate the "Actual Value of Drafted Hitters", enter the following formula in cell N2: **=SUM(MYRANKS_H[$ACTUAL])** Test that this formula is working properly by entering $5 on the "Hitter Ranks" tab for one of the highest ranked players (e.g. Mike Trout). AA: $VALUE — $ 40.05 AB: $ACTUAL — $ 5.00 When you return to the "Scoring Settings" tab you should see this $5 flowing in to the "Actual Value of Drafted Hitters". Actual Value of Drafted Hitters: $ 5 Actual Value of Drafted Pitchers:
8.	Repeat step 7 for the "Actual Value of Drafted Pitchers" field. The formula to enter into cell N3 is: **=SUM(MYRANKS_P[$ACTUAL])** Test that this formula is working properly by entering $10 on the "Pitcher Ranks" tab for one of the highest ranked pitchers (e.g. Clayton Kershaw). Actual Value of Drafted Hitters: $ 5 Actual Value of Drafted Pitchers: $ 10

Step	Description
9.	As I alluded to in the introduction to this section, we need to use "Hitters Below Repl. Level Drafted" to count the number of players chosen during the draft that fall below your definition of Replacement Level.  To calculate this, click on cell N5 and then click the "Insert Function" bar on the Excel toolbar. 
10.	Type "COUNTIFS" in the search box and click "Go". Locate "COUNTIFS" in the list of functions and hit "OK".

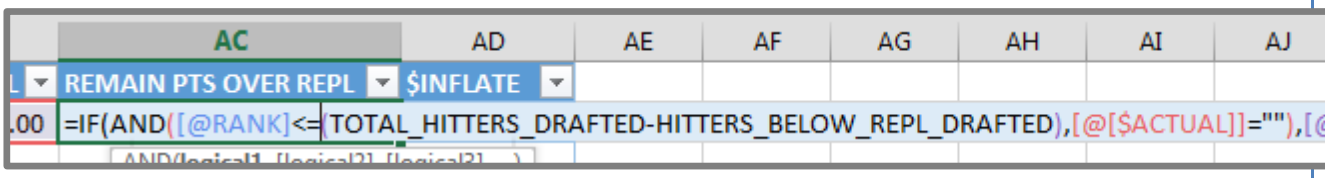
Step	Description
	
11.	To identify players selected that are below replacement level we need to test two criteria: • Do they have a "$ACTUAL" value that is greater than zero (meaning someone bid on and drafted the player) • And is the player's rank greater than the number of hitters/pitchers that should be drafted (meaning they are outside the top 168 hitters or top 108 pitchers). To put this first bullet into our formula enter the following into the "Criteria_range1" field. We are telling Excel we want to evaluate the "$ACTUAL" column in the "Hitter Ranks" tab (our "MYRANKS_H" table) **MYRANKS_H[$ACTUAL]** Then enter **">0"** in the "Criteria1" field. Here we are telling Excel to evaluate and count the number of players with a "$ACTUAL" greater than zero.

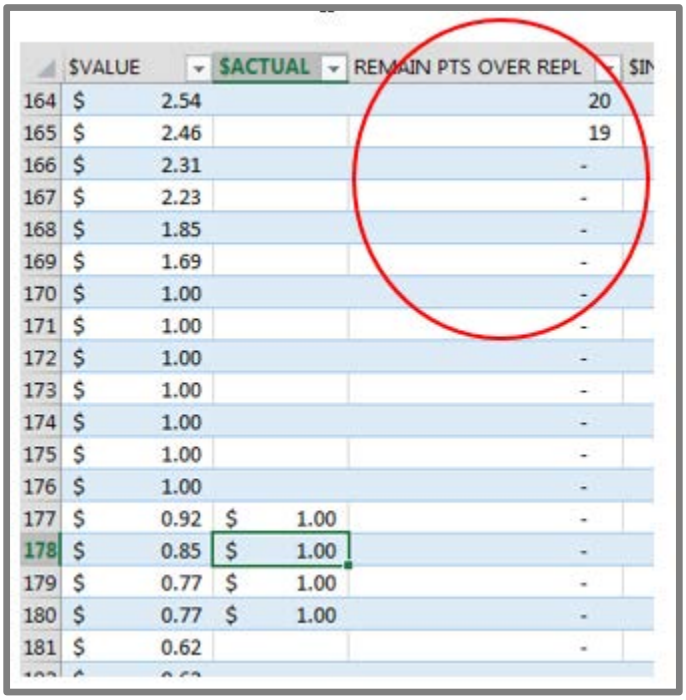
Step	Description
	
12.	To test the first part of our equation, hit "OK" to save the formula with only "Criteria_range1" and "Criteria1" filled out. Because we still have a $5 entry for one of the hitters, you should see a 1 in your "Hitters Below Replacement Level Drafted" field. 
13.	To add our second set of criteria, click once on cell N5 and hit the "Insert Function" button again.

Step	Description
	 Click your mouse in the “Criteria1” field (containing the “>0”. This should make “Criteria_range2” appear. 
14.	We will use “Criteria_range2” to determine if the hitter’s rank falls outside the pool of draftable players (below replacement level). Type the following into the “Criteria_range2” box: **MYRANKS_H[RANK]** Then type the following formula into the “Criteria2” box: **">"&TOTAL_HITTERS_DRAFTED** This last formula is a little odd. We are trying to pull in the number of hitters drafted according to our league settings (cell K8 on the “Scoring Settings” tab in my example). Because we are referencing this cell and not typing in the number “168”, we need to put “TOTAL_HITTERS_DRAFTED” outside the quotation marks. The ampersand (&) appends the “>” and TOTAL_HITTERS_DRAFTED together into one string. You should see this by looking at Excel’s preview of the formula to the right. Excel is interpreting this as “>168”.

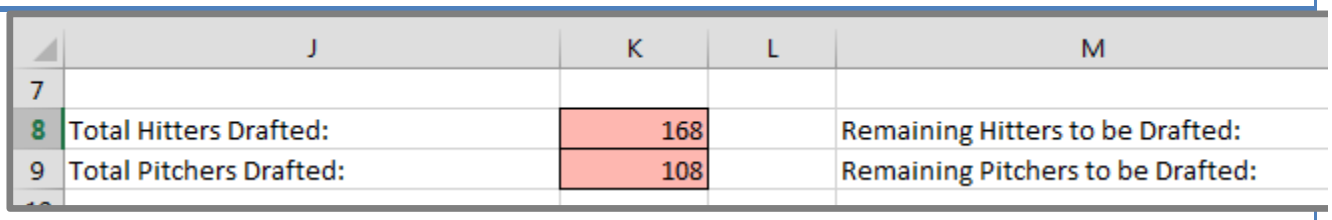
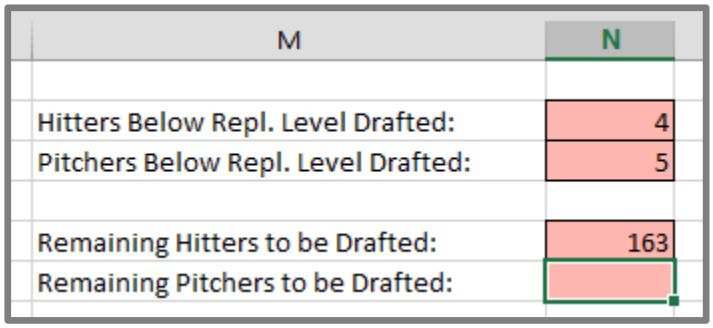
Step	Description
	
15.	Click "OK" to save the COUNTIFS formula. Because we have not entered dollar values for any players below replacement level, you should see a zero now.  To test that this is working properly, go to the "Hitter Ranks" tab and enter $1 in for a player ranked outside your draftable hitters (e.g. the 175th ranked hitter). Then come back to the "Scoring Settings" tab and verify that this player is being counted. 
16.	We'll now to steps 9 through 15 on the "Pitcher Ranks" tab, but we can take a pretty quick shortcut. Instead of building the formula from scratch, just copy the formula from cell N5 and paste it into N6 and make the following adjustments: **=COUNTIFS(MYRANKS_P[$ACTUAL],">0",MYRANKS_P[RANK], ">"&TOTAL_PITCHERS_DRAFTED)** If you want to see what this would look like in the formula wizard:  Perform a similar test to the one we did in step 15. Add a $1 value to a player outside the top draftable pitchers (top 108 for my example file). You should also

Step	Description
	notice that the values of drafted hitters and pitchers is also changing to reflect these $1 players that have been "drafted". Actual Value of Drafted Hitters: $ 6 Actual Value of Drafted Pitchers: $ 11 Hitters Below Repl. Level Drafted: 1 Pitchers Below Repl. Level Drafted: 1
17.	We will be using the "Hitters Below Repl. Level Drafted" and "Pitchers Below Repl. Level Drafted" in later formulas so we should name the cells. Click on the shaded "Hitters Below Repl. Level Drafted" field (cell N5). Hitters Below Repl. Level Drafted: 1 Pitchers Below Repl. Level Drafted: 1 Then type "HITTERS_BELOW_REPL_DRAFTED" in the Name Box and hit Enter. HITTERS_BELOW_REPL_DRAFTED Then click on the shaded "Pitchers Below Repl. Level Drafted" field (cell N6). Then type "PITCHERS_BELOW_REPL_DRAFTED" in the Name Box and hit Enter. PITCHERS_BELOW_REPL_DRAFTED
18.	If it's not still fresh in your mind, now may be a good time to reread the "Below Replacement Level Players" sub-section at the beginning of this chapter. We will now enter a complicated formula in the "REMAIN PTS OVER REPL" column of the "Hitter Ranks" tab. Copy and paste the following into the first cell beneath the "REMAIN PTS OVER REPL" header.

Step	Description
	=IF(AND([@RANK]<=(TOTAL_HITTERS_DRAFTED-HITTERS_BELOW_REPL_DRAFTED),[@[$ACTUAL]]=""),[@[POINTS OVER REPL]],0) 
19.	Let's break this down into more digestible parts so we can understand what this is doing. First the AND formula: **AND([@RANK]<=(TOTAL_HITTERS_DRAFTED-HITTERS_BELOW_REPL_DRAFTED),[@[$ACTUAL]]="")** Recall that the AND formula checks all the conditions listed between the parentheses and makes sure they are true. If all the conditions are met it gives a response of "TRUE". Here are the two conditions I have in the AND formula: • **([@RANK]<=(TOTAL_HITTERS_DRAFTED-HITTERS_BELOW_REPL_DRAFTED)** – this is checking to see if the players rank is less than or equal to the hitters drafted (e.g. 168) minus the hitters selected below replacement level. This is because if a player below replacement level is drafted we no longer assume the top 168 players are drafted. We now care about the top 167 and the one below replacement level player. • **[@[$ACTUAL]]=""** – This is simply a check to see if the player has been drafted/auctioned off (if the $ACTUAL column is blank for the player, "" means blank). Now step outside the and formula to the IF formula: **=IF(AND(Formula),[@[POINTS OVER REPL]],0)** In plain English, this is saying, "If the AND formula is true then give me the players POINTS OVER REPL. If the AND formula is false then give me zero".

Step	Description
20.	To test that this is working, scroll down in the "Hitter Ranks" tab so that you get to the area where your replacement level players are specified. Start entering $1 for several of the players that fall below replacement level (e.g. below 168). You should see the REMAIN PTS OVER REPL start to zero out for players just above the replacement level threshold. Watch the area in the red circle as you add more $1 players. 
21.	Repeat steps 18 and 20 on the "Pitcher Ranks" tab. The formula to paste will be the same as the "Hitter Ranks" formula with the following edits: Copy and paste the following into the first cell beneath the "REMAIN PTS OVER REPL" header. **=IF(AND([@RANK]<=(TOTAL_PITCHERS_DRAFTED-PITCHERS_BELOW_REPL_DRAFTED),[@[$ACTUAL]]=""),[@[POINTS OVER REPL]],0)**
22.	Our next task is to figure out how many players have been drafted. Return to the "Scoring Settings" tab. Click on the "Remaining Hitters to be Drafted" shaded field (cell N8 in my example file).

	$VALUE	$ACTUAL	REMAIN PTS OVER REPL	$IN
164	$ 2.54		20	
165	$ 2.46		19	
166	$ 2.31		-	
167	$ 2.23		-	
168	$ 1.85		-	
169	$ 1.69		-	
170	$ 1.00		-	
171	$ 1.00		-	
172	$ 1.00		-	
173	$ 1.00		-	
174	$ 1.00		-	
175	$ 1.00		-	
176	$ 1.00		-	
177	$ 0.92	$ 1.00	-	
178	$ 0.85	$ 1.00	-	
179	$ 0.77	$ 1.00	-	
180	$ 0.77	$ 1.00	-	
181	$ 0.62		-	

Step	Description
	 This will be our TOTAL_HITTERS_DRAFTED cell (K8 above) minus the count of all players that were drafted (or any player with a value in the $ACTUAL column of the "Hitter Ranks" tab. To do this, enter the following formula in the cell: **=TOTAL_HITTERS_DRAFTED-COUNT(MYRANKS_H[$ACTUAL])** Make sure the answer the formula returns makes sense. For example, I entered a dollar value for the best player and four players below replacement level previously, so my answer of 163 is correct. 
23.	Copy the formula from above and paste it into the "Remaining Pitchers to be Drafted" shaded cell. Change the formula to be: **=TOTAL_PITCHERS_DRAFTED-COUNT(MYRANKS_P[$ACTUAL])** Then verify the answer from the formula seems correct.

	J	K	L	M
7				
8	Total Hitters Drafted:	168		Remaining Hitters to be Drafted:
9	Total Pitchers Drafted:	108		Remaining Pitchers to be Drafted:

	M	N
	Hitters Below Repl. Level Drafted:	4
	Pitchers Below Repl. Level Drafted:	5
	Remaining Hitters to be Drafted:	163
	Remaining Pitchers to be Drafted:	

Step	Description

M	N
Hitters Below Repl. Level Drafted:	4
Pitchers Below Repl. Level Drafted:	5
Remaining Hitters to be Drafted:	163
Remaining Pitchers to be Drafted:	102

24. Next we will determine the "Remaining Draftable Hitter Points". Click on the shaded cell next to this label (cell N11 in my file). Enter the following formula into this cell:

=SUM(MYRANKS_H[REMAIN PTS OVER REPL])

This should be a slightly lower number than the "Draftable Hitter Points" cell to the left. As more and more players are drafted this "Remaining Draftable Hitter Points" amount should approach zero.

11	Draftable Hitter Points:	24,188		Remaining Draftable Hitter Points:
12	Draftable Pitcher Points:	12,814		Remaining Draftable Pitcher Points:
13	Total Draftable Points:	37,002		Total Remaining Draftable Points:

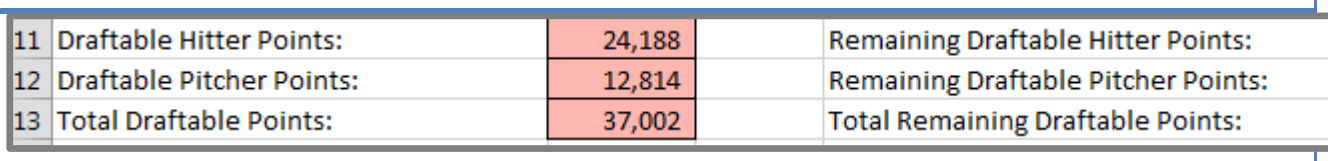
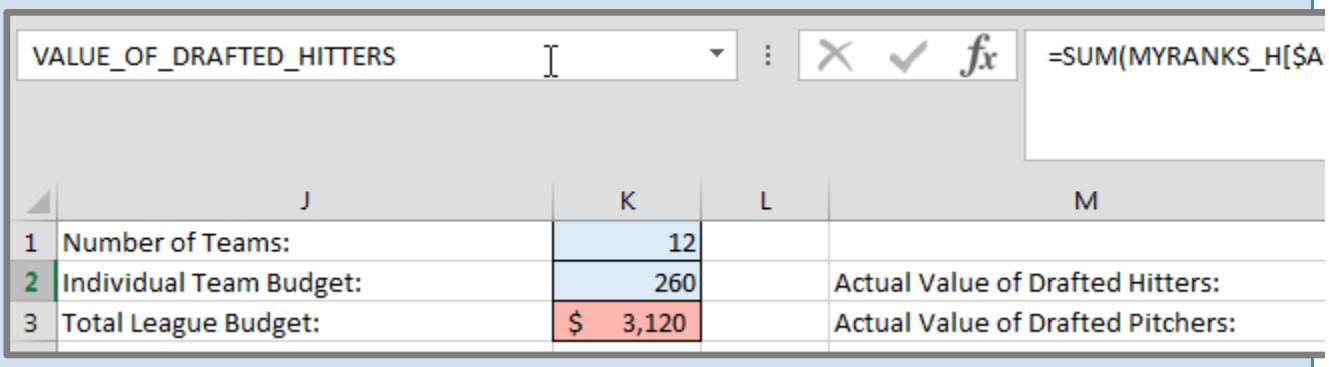
25. Copy the formula from step 24 above and paste it into the shaded cell next to "Remaining Draftable Pitcher Points". Then make this small change to the formula:

=SUM(MYRANKS_P[REMAIN PTS OVER REPL])

11	Draftable Hitter Points:	24,188		Remaining Draftable Hitter Points:
12	Draftable Pitcher Points:	12,814		Remaining Draftable Pitcher Points:
13	Total Draftable Points:	37,002		Total Remaining Draftable Points:

26. Enter the following formula in the "Total Remaining Draftable Points" shaded cell, in order to add the "Remaining Draftable Hitter Points" and "Remaining Draftable Pitcher Points" together (adjust for your spreadsheet if cells are not exactly where my example file's are):

=N11+N12

Step	Description
	
27.	The next thing we'll be doing is to determine the remaining dollars that will be allocated to points. Remember that some of our remaining dollars will be spent on the $1 minimum price for each slot yet to be drafted. The amount of money that will be allocated to points is our league budget: • Less what has been spent on hitters • Less what has been spent on pitchers • Less the number of hitters to still be drafted ($1 per) • Less the number of pitchers still to be drafted ($1 per) I suggest naming each of our cells that correspond to the bullets above. To do this, click in the shaded cell for "Dollar Value of Drafted Hitters" (N2) and enter the name "VALUE_OF_DRAFTED_HITTERS" in the Name Box. Then hit Enter. 
28.	Repeat the naming process for each of these cells: • "Actual Value of Drafted Pitchers" (N3) – name this "VALUE_OF_DRAFTED_PITCHERS" • "Remaining Hitters to be Drafted" (N8) – name this "REMAINING_HITTERS_TO_DRAFT"

Step	Description
	• "Remaining Pitchers to be Drafted" (N9) – name this "REMAINING_PITCHERS_TO_DRAFT"
29.	Then in the shaded cell next to "Remaining Dollars to Allocate to Points" paste the following formula: **=LEAGUE_BUDGET-VALUE_OF_DRAFTED_HITTERS-VALUE_OF_DRAFTED_PITCHERS-REMAINING_HITTERS_TO_DRAFT-REMAINING_PITCHERS_TO_DRAFT**
30.	Now it's time to calculate the inflation adjusted dollar value of each point over replacement level. To calculate this, enter the following formula in cell N16 and hit Enter: **=N15/N13** Remaining Dollars to Allocate to Points: $ 2,831 Remaining Dollar Value Per Point: $0.07874 Because my calculation results in so many decimals, I formatted this cell to have a dollar sign and then I increased the decimals several places.
31.	We will be using the value we just calculated on the "Hitter Ranks" and "Pitcher Ranks" tabs to calculate an inflation-adjusted value for each player. I suggest naming the cell so it will be easier to reuse on these other tabs. Click on the "Remaining Dollar Value Per Point" shaded cell and then enter the name "REMAINING_DOLLAR_VALUE_PER_POINT". Hit Enter to save the name. REMAINING_DOLLAR_VALUE_PER_POINT
32.	Now go to the "Hitter Ranks" tab. In the first cell under the $INFLATE column header, enter the following formula:

Step	Description
	=[@[POINTS OVER REPL]]*REMAINING_DOLLAR_VALUE_PER_POINT+1 This formula will calculate takes each players inflation-adjusted price given the amount of money the league has remaining to spend in the draft and the projected points to be scored by the remaining players.
33.	Things will probably seem like they're working at this point, but if you take a closer look there's still one thing we should change. The formula for step 32 is also calculating a new price for players that have already been drafted. Formula Bar AB: $ACTUAL; AC: REMAIN PTS OVER REPL; AD: $INFLATE 05 — $ 5.00 — - — $ 41.00 05 — 495 — $ 39.98 43 — 461 — $ 37.30 59 — 437 — $ 35.41 We should add a condition so that if a player has an $ACTUAL price that no inflation adjusted price will calculate. To do this, revise the formula from step 32 to be: **=IF([@[$ACTUAL]]="",[@[POINTS OVER REPL]]*REMAINING_DOLLAR_VALUE_PER_POINT+1,0)** AA: $VALUE; AB: $ACTUAL; AC: REMAIN PTS OVER REPL; AD: $INFLATE $ 40.05 — $ 5.00 — - — $ - $ 39.05 — 495 — $ 39.98 $ 36.43 — 461 — $ 37.30
34.	Copy the formula above and paste it into the first cell of the $INFLATE column on the "Pitcher Ranks" tab. X: $VALUE; Y: $ACTUAL; Z: REMAIN PTS OVER REPL; AA: $INFLATE $ 37.28 — $ 10.00 — - — $ - $ 30.21 — 380 — $ 30.92 $ 29.82 — 375 — $ 30.53

Step	Description
35.	You did it!

WRAP UP

You now have dollar value calculations that will update immediately as you enter in drafted players. If teams in your league are overspending, you can instantly see the effect this will have on prices the remainder of the draft. You'll be able to make decisions that help you to squeeze every drop of value out of the player pool and onto your roster!

DO YOU HAVE ANY QUESTIONS?

Do you have questions about Part 9? Or want to see what others have asked? Check here.

EXAMPLE EXCEL FILE

Download the example spreadsheet illustrating the work done in this part here. Or you can download all spreadsheets for the entire book here.

FREQUENTLY ASKED QUESTIONS

I DON'T AGREE WITH ALL OF THE PROJECTIONS INCLUDED IN THE FILE I DOWNLOADED. CAN I EDIT THEM?

Yes! Simply go the hitter or pitcher projections tabs and type over the projected statistics you don't like.

For instance, in my example file Bryce Harper is projected for only 557 plate appearances and 23 home runs, surely due to his injury history. If you feel very strongly that he'll stay healthy this year and get to 650 plate appearances and 29 home runs, just locate him on the "Steamer Hitters" tab and type in the full projection you wish to have.

playerid	Name	PA	AB	H	2B	3B	HR	R	RBI	BB
11579	Bryce Harper	557	484	135	25	4	29	73	73	
392	Victor Martinez	592	527	163	31	1	20	79	84	

They great thing about this spreadsheet we have built is that everything is linked. As soon as you type in Harper's new projection you will see everyone's dollar value update! You'll get a new dollar value for Harper and it will change everyone else's value slightly.

This is also extremely valuable for player injuries that happen during the preseason.

If you really enjoy the process of developing your own projections, I have guidance on how you can create your own here.

I PLAY IN MORE THAN ONE POINTS LEAGUE AND THEY'RE ALL SLIGHTLY DIFFERENT. HOW CAN I USE THIS FILE FOR ALL MY LEAGUES?

I would suggest working your way through the entire book with one league in mind and save the file. When you're confident you have that one correct and finished perform a "Save As" in Excel.

Name this new file "League 2 Points League Rankings" or something to clearly identify it's for the next league. Then you will only need to make these adjustments (you don't have to start from scratch for each league):

1. Make the necessary adjustments on the "Scoring Settings" tab. Revisit the step-by-step instructions in Part 2 if you need to add new scoring categories.

   Then be sure to make the related adjustments in the "PROJ PTS" columns on the "Hitter Ranks" and "Pitcher Ranks" tabs. Review the instruction in Part 5 for a reminder on this.

2. Update the Team and League settings on the "Scoring Settings" tab.

3. Re-determine replacement level for this new league. I would delete the point values from the Replacement Level table, clear any shading you did to identify and start all over with this exercise. I find it very confusing to only make minor adjustments. It's easier for me to just start over.

SLG	PROJ PTS	REPL LEVEL
0.394	494	-
0.404	516	-
0.397	499	-
0.398	513	-
0.383	512	-
0.375	507	-
0.392	489	-
0.431	501	-

I HAVE A MAC AND USE EXCEL FOR MAC. CAN I USE THIS BOOK?

Yes and no. It is my understanding that some of the newer versions of Excel for Mac do use the Table and Structured Reference formula terminology that I use in this book. For those newer versions I think this book will work as expected.

Unfortunately, this is a somewhat recent development. Some older versions of Excel for Mac are very different than the Windows version and do not have all the same functionality.

If you are an experienced Excel user, I think you will be able to work around the formula differences. If you're not, these instructions might not translate well to Excel for Mac. I don't know why the two programs are so different, but they are.

The most notable difference is the Named Table function, which is utilized in many of the VLOOKUP formulas in this book.

You can work around this by tweaking the VLOOKUP formulas. An example formula given in this book might be:

=VLOOKUP([@PLAYERID],PLAYERIDMAP,COLUMN(PLAYERIDMAP[LASTNAME]),FALSE)

Where [@PLAYERID] is referencing the "PLAYERID" column in a named table and where "LASTNAME" is a column in the "PLAYERIDMAP" named table.

In Excel for Mac, you would need to use a formula like this:

=VLOOKUP(A2,PLAYERIDMAP,4,FALSE)

Where cell “A2” is the “PLAYERID” to look up and where “4” is the fourth column in the PLAYERIDMAP. Depending on your familiarity with Excel, you might even prefer this formula.