



Formulas course activity

 By the end of this activity, you will be able to:	 Follow these steps to get the course activity assets
<ul style="list-style-type: none"> • Create a nested IF function • Perform date based calculations 	<ol style="list-style-type: none"> 1. Go to the Get the Course Activity Assets lesson on the left 2. Click the appropriate link for your region 3. Open the following sheet: 01_Sheet Basics Course Assets > 03_Formulas Activity > 02_Marketing Request Tracker - Formulas

Nested IF function - Assigned To column

In the interactive lesson on formulas, you created an IF function in the Assigned To column. The IF function assigned Jose to any request where HR is the requesting department. In this activity you need to complete the IF function for the other departments. You'll do this by creating a nested IF function. A nested IF function is multiple IF functions chained together. The idea is if the first IF function logic evaluates to false, then you check another logic expression with another IF function. Here's an example:

=IF(5 < 2, "True 1", IF(5 > 2, "True 2"))
Since 5 is not less than 2, this nested IF function will jump to the second IF statement and check if 5 is greater than 2 and evaluate to "True 2".

Syntax, meaning the placement of parentheses, commas, and quotations is incredibly important! To adjust your IF statement:

<ol style="list-style-type: none"> 1. Double click inside the cell in row 1 in the Assigned To column to edit the existing IF function 	
<ol style="list-style-type: none"> 2. After "Jose" add a comma and the word IF inside the parentheses 	<code>=IF(Department@row = "HR" , "Jose" , IF)</code>
<ol style="list-style-type: none"> 3. Add an open and close parenthesis: 	<code>=IF(Department@row = "HR" , "Jose" , IF())</code>

- | | |
|---|---|
| 4. Inside the parentheses, add
Department1="Marketing","Maggie" | =IF(Department@row = "HR" , "Jose" ,
IF(Department@row = "Marketing" , "Maggie")) |
| 5. OPTIONAL: Continue adding IF
statements using steps 2-4 for the
departments and people listed to
the right | Sales should be assigned to Cheryl
Operations should be assigned to Julia
Legal should be assigned to Anouk |

Finished formula should look like this:

```
=IF(Department@row = "HR", "Jose", IF(Department@row = "Marketing", "Maggie", IF(Department@row = "Sales", "Cheryl",  
IF(Department@row = "Operations", "Julia", IF(Department@row = "Legal", "Anouk")))))
```

6. To finish this formula, right click in the cell containing the formula and select Convert to column formula.

Nested IF function - Progress column

Let's practice another nested IF function. You'll create a Progress column that is linked to the percent complete column and shows a harvey ball based on the percent complete:



1. Right click on the Urgent column header and select Insert Column Right

2. Name the column Progress and select Symbol > Harvey Ball

Column Name: Progress
Column Type: Harvey Ball



3. Double click inside the cell in row 1 in the Progress column and create an if formula

=IF(

4. With your cursor next to the open parenthesis you can scroll your sheet over and click inside the % Complete column in row 1. This will add the appropriate reference to the % Complete cell. =IF([% Complete]@row
5. The first logic expression is if the % complete equals 0 set the harvey ball to empty. Type = 0, "Empty") =IF([% Complete]@row = 0, "Empty")
6. Hit enter to make sure your formula is evaluating. Since all % Complete values are currently at 0% you should see an empty harvey ball in the cell.
7. When you're ready, complete the nested IF function according to the criteria to the right. Remember that % Complete is formatted as a percent so percentages need to be converted to decimals in formulas.
 - % Complete less than 0.25 set harvey ball to "Quarter"
 - % Complete less than 0.5 set harvey ball to "Half"
 - % Complete less than 0.75 set harvey ball to "Three Quarter"
 - % Complete less than or equal to 1 set harvey ball to "Full"

Finished formula should look like this:

```
=IF([% Complete]@row = 0, "Empty", IF([% Complete]@row < 0.25, "Quarter", IF([% Complete]@row < 0.5, "Half", IF([% Complete]@row < 0.75, "Three Quarter", IF([% Complete]@row <= 1, "Full")))))
```

8. To finish this formula, right click in the cell containing the formula and select Convert to column formula. You can also change the % complete values to see the Harvey balls change.

Project duration

You can also perform calculations on date columns. Let's create a duration column that tracks the number of days from the start date to the estimated completion date.

1. Right click on the Estimated Completion Date column header and select Insert Column Right

2. Name the column Duration and select Text/Number for the column type

Column Name: Duration
Column Type: Text/Number

3. Double click inside the cell in row 1 in the Duration column and create an NETWORKDAYS formula

=NETWORKDAYS(

There are multiple formulas that you could use for this scenario. WORKDAYS calculates the number of days between two dates including Saturdays and Sundays. NETWORKDAYS calculates the number of days between two dates without Saturdays and Sundays.

4. Click inside the Date Started column in row 1. This will create a cell reference

=NETWORKDAYS([Date Started]@row

5. Type a comma and then click inside the Estimated Completion Date column in row 1.

=NETWORKDAYS([Date Started]@row,[Estimated Completion Date]@row

6. Type a closing parenthesis and hit Enter to evaluate the formula

=NETWORKDAYS([Date Started]@row,[Estimated Completion Date]@row)

7. To finish this formula, right click in the cell containing the formula and select Convert to column formula. You will see errors in the two children rows that don't contain dates. You can delete the formula in these two rows.

Great job! You reached the end of the activity!