

Screencasts

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Quiz 3 solutions and explanations

Quiz 3 Solutions & Explanations

Everyday Excel, Part 1

Charlie Nuttelman

Hello there! This document is meant to provide clear explanations for the Quiz 3 questions (not the in-video quizzes since they have explanations already). I do NOT provide feedback during the quiz (like I do for the screencasts) because a learner could just guess, obtain the correct answers, then put them back into the quiz and get 100%!

This document is purely for you to learn more and to correct your misconceptions about the material. If you view this document soon after you take the quiz to see why you missed a certain question, it will serve as a great learning tool!

PLEASE DO NOT SHARE THIS DOCUMENT WITH ANYONE! Using this document to complete Quiz 3 is a violation of Coursera's Honor Code (a.k.a. cheating).

NOTE that the order of the answers on Coursera are random and likely different from the order shown here (in general but not always, I like to start with the correct answers followed by the incorrect ones).

Question 1:

Which formula shown below could you use to determine the monthly payment on a \$5,000 loan if you want to pay it off in 10 years? The annual interest rate is 5% and interest is compounded monthly.

Explanation: We are given loan amount, number of years, and interest rate. We are asked to find the monthly payment. The **PMT** function will provide the payment given everything else.

Correct answer: **=PMT(0.05/12,120,5000,0)**

Note that we must divide the annual interest rate by 12 and we have 120 periods in 10 years since we are compounding monthly.

Incorrect answers:

=FV(0.05,12,5000) --> This determines the future value, not payment amount

=PMT(0.05,10,5000,0) --> It is correct to use the PMT function, but the interest rate is 0.05/12 since we are compounding monthly. The number of payment periods should be 120, not 10. This would be correct if we compounded annually and not monthly.

=PMT(0.05,120,5000,0) --> The number of payment periods (120) is correct, but the interest rate (first argument) must be divided by 12.

Question 2:

Which of the following Excel formulas below could we place into cell **G5** to calculate the maximum temperature on the day of the week that is input into cell **G4**? The formula should provide the maximum on that day of the week over the last two weeks (rows 3 through 16) and should automatically update if the day of the week in cell **G4** is changed.

	A	B	C	D	E	F	G
1							
2	Date		Low	High			
3	5/4/2020 Monday		48	75			
4	5/5/2020 Tuesday		47	72		Day: Wednesday	
5	5/6/2020 Wednesday		42	68		Max Temp:	81
6	5/7/2020 Thursday		48	77			
7	5/8/2020 Friday		48	78			
8	5/9/2020 Saturday		39	68			
9	5/10/2020 Sunday		34	67			
10	5/11/2020 Monday		36	63			
11	5/12/2020 Tuesday		48	76			
12	5/13/2020 Wednesday		49	81			
13	5/14/2020 Thursday		42	75			
14	5/15/2020 Friday		51	83			
15	5/16/2020 Saturday		37	62			
16	5/17/2020 Sunday		47	74			
17							

Solution: The correct answer is: **=MAX(IF(B3:B16=G4,D3:D16,0))**

Question 3:

Which of the following formulas could be placed into cell **B4** to provide the result shown? Multiple correct answers, and all must be selected for credit.

	A	B
1	G	
2	A	
3		
4	T	GATTACA

4	T	
5	T	
6	A	
7		
8	C	
9	A	

A. `=TEXTJOIN("",TRUE,A1:A9)`

Correct! We can use the **TEXTJOIN** function with a blank delimiter (") to join the strings in cells **A1:A9** into a single string.

B. `=CONCAT(A1:A9)`

Correct! The **CONCAT** function will join the strings in cells **A1:A9** into a single string.

C. `=CONCATENATE(A1:A9)`

Incorrect. In order to use the **CONCATENATE** function to join these letters, each cell must be put into the function as a single argument. `"=CONCATENATE(A1,A2,A4,A5,A6,A8,A9)"` would work but a range of cells cannot be used as an argument in the **CONCATENATE** function.

D. `=TEXTJOIN(A1:A9)`

Incorrect. The **TEXTJOIN** function has 3 arguments (delimiter, whether you want to include blank cells or not, and the range that you are joining). It cannot be used with just a single argument.

E. `=CONCAT(A1:A2)&CONCAT(A4:A6)&CONCAT(A8:A9)`

Correct! We can join strings also using the & sign, so this will work.

Question 4:

Which range of cells on the following worksheet are being referenced to by the following Excel formula?

	A	B	C	D
1	W	W	M	D
2	M	V	D	H
3	K	Z	Z	E
4	O	T	F	E

`=OFFSET(A3,-1,2,3,1)`

Solution: The first argument of the **OFFSET** function is the "base" cell, which is cell **A3**. The second and third arguments are how many rows and columns we offset from the base cell. If we offset -1 row and 2 columns, that results in cell **C2**. The fourth and fifth arguments specify the output size of the resulting array, which is a 3x1 array (3 rows, 1 column). So, this refers to cells **C2:C4**.

Question 5:

Which of the following Excel formulas could we put into cell **B8** to count the number of items in the range **A1:D6** that are less than 50?

	A	B	C	D
1	60	45	80	50
2	70	80	5	15
3	65	25	65	50
4	50	100	90	25
5	85	20	35	75
6	15	45	85	55
7				
8		9		

Solution: The **COUNTIF** function will do this (we are not asked for the sum of the values less than 50, so the **SUMIF** function should not be used). The correct syntax for the **COUNTIF** function has the range that you are counting over as the first argument and a conditional statement (in quotations) as the second argument. Therefore, `=COUNTIF(A1:D6,"<50")` is correct.

✓ Complete

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