# Quick Concepts Check Answer Key Exploring Microsoft Excel 2016, Chapter 2

1. **What happens when you copy a formula containing a relative cell reference one column to the right?**  
   The cell references in the copied formula adjust one column to the right. For example, if the original formula is =B1+C1, the copied formula would be =C1+D1. The row numbers remain the same while the column letters change relative to the direction (to the right) that you copy the formula.
2. **Why would you use an absolute reference in a formula?**  
   You would use an absolute reference when you want a permanent reference to a particular cell and don’t want that reference to change when you copy the formula to another location.
3. **What is the benefit of using a mixed reference?**

When applicable, mixed references can be used in place of absolute references as a method of shortening the length of the formula.

1. **What visual features help guide you through typing a function directly in a cell?**  
   Formula AutoComplete provides a list of function names as you type. Function ScreenTips provide the syntax of a function as you type it, where the name of the argument you are currently typing is bold.
2. **What type of data do you enter in a Function Arguments dialog box, and what are four things the dialog box tells you?**  
   You enter the required and optional arguments for a particular function. The dialog box tells you the values stored in the respective arguments, the function results, a description of the active argument, a link to get help on the function, and a description of the function itself.
3. **What is the difference between the AVERAGE and MEDIAN functions?**  
   The AVERAGE function provides a mathematical average of values in a range, whereas the MEDIAN function provides the exact midpoint value in a range in which one-half of the numbers are above the median and one-half are below.
4. **What is a nested function, and why would you create one?**  
   A nested function is where one function is used as an argument within another function. You use nested functions to create more complex functions that provide sophisticated calculations that otherwise would be very difficult.
5. **Describe the three arguments for an IF function.**  
   The logical\_test is an expression that evaluates to true or false. The value\_if\_true argument contains the result if the logical\_test is true. The value\_if\_false argument contains the result if the logical\_test is false.
6. **How should you structure a vertical lookup table if you need to look up values in a range?**  
   The lookup values need to be in the first column of the lookup table, and if the last optional argument for range\_lookup is TRUE (or omitted), then the first column of the lookup table should be sorted in ascending order.
7. **What are the first three arguments of a PMT function? Why would you divide by or multiply an argument by 12?**  
   The first argument is the rate of the loan. If the rate is expressed on an annual basis and you want to calculate monthly payments, you must divide the rate by 12. The second argument is nper, the number of periods for the loan. If the term is expressed in years, you must multiply the number of years by 12 to get the total number of monthly payments. The third argument is pv, or the present value of the loan.