Chapter 15: Working with Formulas and Functions
Quiz Yourself Answers

1. A relative reference is cell reference that is interpreted in relation to the location of the cell containing the formula. An absolute reference is cell reference that remains fixed when copied to a new location; it includes $ in front of both the column letter and row number. A mixed reference is cell reference that contains an absolute row reference or an absolute column reference, such as $A2 or A$2.

2. For cell H9, the relative reference is H9, the absolute reference is $H$9 and the mixed reference is either $H9 or H$9.

3. To cycle a cell reference from relative to absolute to mixed and then back to relative, select the reference and then press the F4 key.

4. The general syntax of all Excel functions is
   \[ \text{FUNCTION}(\text{argument1}, \text{argument2}, \ldots) \]
   where \text{FUNCTION} is the name of the function, and \text{argument1}, \text{argument2}, and so forth are arguments.

5. In a function, arguments are the numbers, text, or cell references used by the function to return a value.

6. To type a function directly in a cell, first type an equal sign. As you begin to type a function name, a list of functions that begin with the letters you typed appears. To insert a function in the active cell, double-click its function name. You can then either select a cell or range or type the appropriate reference or argument. When the function is complete, you enter it into the cell as usual.

7. AutoFill is an Excel feature that copies content and formats from a cell or range into an adjacent cell or range.

8. After you select a cell or range, the fill handle appears in the lower-right corner of the selection. When you drag the fill handle over an adjacent range, AutoFill copies the content and formats from the original cell into the adjacent range.

9. To create a series of numbers with AutoFill, you enter the initial values in the series, such as the first few consecutive integers, in a selected range to establish the pattern for AutoFill to use, select the range, and then drag the fill handle over the cells where you want the pattern continued.

10. The IF function is a logical function that returns one value if a statement is true and returns a different value if that statement is false.

11. The formula that tests whether the value in cell S2 is equal to the value in cell P7, and then, returns 75 if it is, but returns 150 otherwise is:
   \[ \text{=IF}(S2=P7, 75, 150) \]

12. A date function is a function that inserts or calculates dates and times.

13. The TODAY function returns the current date.

14. The PMT function is a financial function that calculates the monthly payment required to pay back a loan.
15. The syntax of the PMT function is
\[ \text{PMT}(\text{rate}, \text{nper}, \text{pv}[, \text{fv}=0][, \text{type}=0]) \]
where \( \text{rate} \) is the interest rate for each payment period, \( \text{nper} \) is the total number of payment periods required to pay off the loan, \( \text{pv} \) is the present value of the loan or the amount that needs to be borrowed, \( \text{fv} \) is the future value of the loan, and \( \text{type} \) specifies when the interest is charged on the loan.

16. To determine the interest rate per month, divide the annual interest rate by 12.

17. The formula to determine the monthly payment for a $50,000 loan with an annual interest rate of 4 percent that will be repaid in 3 years is:
\[ =\text{PMT}(0.04/12,3*12,50000) \]

18. The PMT function returns a negative value because the payment is considered an expense, which Excel treats as a negative value. To display the value as a positive number in the worksheet, enter a minus sign directly before the PMT function, such as:
\[ =-\text{PMT}(0.04/12,3*12,50000) \]