**MOAC Excel Lesson 4 Guided Notes**

**Understanding and Using Formulas**

1. The real strength of Excel is its capability to perform common and complex \_\_\_\_\_\_\_\_\_\_\_\_\_. The \_\_\_\_\_\_\_\_\_\_\_ is one of the essential elements of Excel, which enables you to \_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_ numbers.
2. What is a formula?
3. What is a value?
4. A formula consist of 2 elements. What are they?
5. What are operands?
6. Can an operand be a constant value?
7. Can an operand be a variable?
8. What is a constant?
9. What is a variable?
10. What are calculation operators?
11. What do all formulas begin with?
12. What are the four types of calculation operators?
13. What are the arithmetic operators for addition, subtraction, multiplication, division, percent, and exponentiation?
14. What do you click so all formulas in your worksheet show?

**Understanding Order of Operations**

1. If you use more than one operator in a formula, Excel follows a specific order called the \_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to calculate the formula.
2. You can use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a formula to override the standard order of operations. Excel performs calculations on formulas inside parentheses \_\_\_\_\_\_\_\_\_\_\_\_\_.

**Creating a Formula that Performs Addition**

1. You can add two or more numbers in Excel using the \_\_\_\_\_\_\_\_\_\_\_ sign between each number. To use proper Excel format, you must include the \_\_\_\_\_\_\_\_\_\_ sign at the beginning of the formula.
2. What sign do you use for subtraction?
3. What sign do you use for multiplication?
4. What sign do you use for division?

**Using Cell References in Formulas**

1. What is a cell reference?

**Using Relative Cell References in a Formula**

1. What is a Relative Cell reference?
2. You use \_\_\_\_\_\_\_\_\_\_\_\_ cell references when you want the reference to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ adjust when you \_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_ rows or down columns in ranges of cells.
3. What are the 2 methods for creating formulas using relative references?
4. In a worksheet, do numbers have to be adjacent to each other to perform mathematical operations?

**Using Absolute References in a Formula**

1. Sometimes you do not want a cell reference to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ when you move or copy it.
2. What sign do you use to make a cell reference absolute?
3. How would you enter A4 in a cell to make it absolute?

**Using Mixed Cell References in a Formula**

1. What is a mixed cell reference? Provide an example.

**Using External Cell References**

1. What is an external cell reference?
2. What is the general format of a formula that references a cell in a different worksheet?

**Referencing Data in Another Workbook**

1. What is the difference in referencing data in another workbook and referencing data in another worksheet?

**Using Cell Ranges in Formulas**

1. In Excel, groups of cells are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. If I have the range of cells C4:C10, can I name this range SalesQ3 and then use the name in a formula and get the same result as using C4:C10?
3. What is a named range?
4. What is the scope of a name?