**SPH3U0 Review of Scientific Notation Date:\_\_\_\_\_\_\_\_\_\_\_\_\_**

Any quantity can be expressed using a power of ten. As you move the decimal point, you

multiply by 10 as many times as necessary to make the numbers equal. Consider the

following examples:

325 = 32.5 x 10 = 3.25 x 101

325 = 3.25 x 10 x 10 = 3.25 x 102

325 = 0.325 x 10 x 10 x 10 = 3.25 x 103

Because 100 = 1 we can also express 325 as 325 x 100.

A number in **scientific notation** has two parts. The number in front of the “x 10” is called

the coefficient. The power to which 10 is raised is called the exponent.

3.25 x 103

**exponent**

**coefficient**

**coefficient**

The coefficient must have one and only one digit in front of the decimal point.

There are three rules for using scientific notation:

***Rule 1*:** To express a number in scientific notation, you move the decimal point to the position such that there is one nonzero digit to the left of the decimal point.

***Rule 2*:** If the decimal point is moved to the **left,** the exponent is **positive**. (i.e. numbers greater than 0!)

***Rule 3***: If the decimal point is moved to the **right**, the exponent is **negative**. (i.e. decimal numbers!)

**Practice:**

