The Atlantic Pacific Rule

(1) **Pacific – ''P'' is for decimal point is present.** If a decimal point is present, count significant digits starting with the first non-zero digit on the left (Pacific side of the US). Examples:

(a) 0.004713 has 4 significant digits.

(b) 18.00 also has 4 significant digits.

(2) Atlantic – "A" is for decimal point is absent. If there is no decimal point, start counting significant digits with the first non-zero digit on the right (Atlantic side of the US).

Examples:

(a) 140,000 has 2 significant digits.

(b) 20060 has 4 significant digits.

Imagine a map of the U.S.; If the decimal is **a**bsent count from the **A**tlantic side. If the decimal point is **p**resent, count from the **P**acific side. In both cases, start counting with the first non-zero digit.

Calculations shouldn't have more precision than the least precise measurement. This leads to 2 rules:

(A) For addition and subtraction: The answer should not have more places past the decimal than the number with the least places past the decimal. Example: 1.2 + 12.348 = 13.5 Not 13.548

(B) For multiplication and division: The answer should not have more significant figures than the number with the least amount of significant figures. Example:  $502 \times 3.6 = 1800$  Not 1807.2

These last 2 rules can be called the Many-Places rule.

For mult/div, how many significant figures is important. For plus/minus, number of places is important.