6.3 Solving Basic Percent Problems

A Percent Problem will have 3 numbers related to each other in the Percent Statement of the Problem.

A Percent Statement will be of the Form:

the Amt is a Percent of the Base.

For example:

20 is 50% of 40

\[ \frac{\text{Amt}}{\text{Base}} = \frac{20}{40} \]

(20 is half of 40)

There are some "landmarks" in the statement to help determine which number should be named Amt, Pct or Base.

1. The "easiest to find" landmark is the % symbol or the word "Percent" which will always identify the value for "Percent".

2. The "2nd easiest to find" landmark is the word "of", which will always be followed by the value for the "Base".

3. The Amt can be determined last, after Percent and Base have been determined, by the process of elimination, although the word "is" usually follows the Amt value. Even when stated in a different order, the landmarks will still identify the 3 values:

\[ \frac{\text{Percent}}{\text{Base}} \]

\[ \text{50% of 40 is 20} \]

\[ \frac{\text{Percent}}{\text{Base}} \]

When solving a percent problem, one of the 3 values will be missing and will be labeled "X". For example, in the statement:

30 is what percent of 50?

1. Base = 50 (comes after of)

2. Percent = X (the word percent comes after what)

\[ \frac{\text{Percent}}{\text{Base}} = \frac{X}{50} \]
IN CLASS WORK

\[ 0.3 \text{ p} 456 \text{ IDENTIFY THE RATE (PERCENT), BASE AND AMOUNT IN EACH PROBLEM. USE X FOR AN UNKNOWN} \]

\#8) What Percent of 150 is 30?

\[ \text{RATE: } \underline{\quad} \quad \text{BASE: } \underline{\quad} \quad \text{AMT: } \underline{\quad} \]

\#10) What is 60% of 250?

\[ \text{RATE: } \underline{\quad} \quad \text{BASE: } \underline{\quad} \quad \text{AMT: } \underline{\quad} \]

\#13) JAN has 5% commission rate on all her sales. If she sells $40,000 worth of merchandise this month, what commission will she earn?

\[ \text{RATE: } \underline{\quad} \quad \text{AMT: } \underline{\quad} \quad \text{BASE: } \underline{\quad} \]