

## Solving Math Word Problems

### THERE ARE TWO STEPS TO SOLVING MATH WORD PROBLEMS:

1. Translate the wording into a numeric equation that combines smaller "expressions"
2. Solve the equation!

Word problems are a series of expressions that fits into an equation. An equation is a combination of math expressions.

### SUGGESTIONS:

#### **Read the problem entirely**

Get a feel for the whole problem

#### **List information** and the variables you identify

Attach units of measure to the variables (gallons, miles, inches, etc.)

#### **Define what answer you need,**

as well as its units of measure

#### **Work in an organized manner**

Working clearly will help you think clearly

Draw and label all graphs and pictures clearly

Note or explain each step of your process;

this will help you track variables and remember their meanings

#### **Look for the "key" words** (above)

Certain words indicate certain mathematical operations:

### VOCABULARY AND KEY WORDS:

#### **"Per" means "divided by"**

as "I drove 90 miles on three gallons of gas, so I got 30 miles per gallon" (Also 30 miles/gallon)

#### **"a" sometimes means "divided by"**

as in "When I tanked up, I paid \$3.90 for three gallons, so the gas was 1.30 a gallon, or \$1.30/gallon

#### **"less than"**

If you need to translate "1.5 less than x", the temptation is to write " $1.5 - x$ ". DON'T! Put a "real world" situation in, and you'll see how this is wrong: "He makes \$1.50 an hour less than me."

You do NOT figure his wage by subtracting your wage from \$1.50. Instead, you subtract \$1.50 from your wage

#### **"quotient/ratio of" constructions**

If a problems says "the ratio of  $x$  and  $y$ ",

it means " **$x$  divided by  $y$** " or  $x/y$  or  $x \div y$

#### **"difference between/of" constructions**

If the problem says "the difference of  $x$  and  $y$ ",

it means " **$x - y$** "