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$"**