Tips for Problem Solving

1) Understand the problem
    a. read & reread the problem(may take several readings), can you restate it in your own words
    b. draw a picture, sometimes it shows better what is going on in the problem
    c. Is there extra or missing information?

2) Devise a plan
    a. List known information
    b. List what is needed to solve the problem
    c. Break the problem into smaller parts, if possible
    d. Translate the problem into an equation

3) Carry out the plan
    a. Work carefully
    b. Keep records so you don't repeat your mistakes
    c. Be patient & keep trying

4) Review your Solutions
    a. Check the solution in the equations
    b. Check the solution in the problem
    c. If it does not work in Both of these, retry
    d. Interpret your results in the context of the problem, if it does not make sense, again retry.

More Tips for Problem Solving

For problems that have values, a chart can be helpful.

For problems involving distance, draw a picture, & if necessary note directions.

AC=V, (amount of ingredient) x (cost per unit) = (value of ingredient)

d=rt, distance = rate x time, or r = d/t – as in miles per hour (mph = m/h)

Pr=I, Principal x rate = interest earned

Q=Ar, Quantity of mixture = Amount(of one substance) x percent of the concentration(this basically a rate in percent converted to decimal form)

Note: 100% = 1.00

An even integer can be divided by 2, & can be written as 2n.

An odd integer cannot be divided by 2, & can be written as 2n + 1.

Consecutive integers follow with no breaks, can be written as n, n+1, n+2…

Consecutive even (odd) integers can be written as n, n+2, n+4 - n is even(odd)