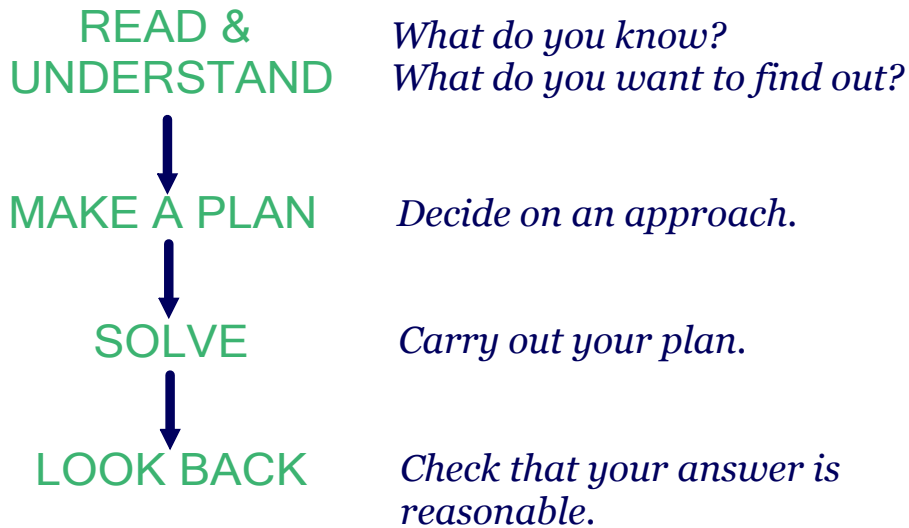


Problem - Solving Strategy: Write an Equation

Remember we learned the
Problem Solving Strategy in Chapter 1...



Today our goal is to...

- Read a problem.
- Define variables.
- Write an equation.

Example

Let $x =$ Jennifer's age now
Six years ago, twice Jennifer's age
 is 16 years. How old is she now?
mult. by 2

$$2(x - 6) = 16$$

Example

When she graduated from college twenty-seven years ago Kimber ^{is} was 21. How old is she now?

Let x = Kimber's age now

$$x - 27 = 21$$

Example Let x = # of lbs lost per week

For 6 consecutive weeks, Connie lost the same amount of weight. Six weeks ago she weighed 145 pounds. She now weighs 125 pounds. How many pounds did Connie lose each week?

$$\begin{array}{ccc} \text{start} & & \text{end} \\ 145 & - & 6x = & 125 \end{array}$$

Example Let $x = \#$ of years to grow
 Ponderosa pines grow about $1\frac{1}{2}$ feet
 each year. If a pine tree is now 17
 feet tall, about how long ~~will~~ will it
 take the tree to become $33\frac{1}{2}$ feet
 tall? start

$$17 + 1\frac{1}{2}x = 33\frac{1}{2} \quad \text{end}$$

Example Let $x =$ Allie's age now
Four years ago, ^{$x-4$} three times Allie's
 age ^{was} was 42, her father's age now.
 How old is Allie now?

$$3(x-4) = 42$$

Example

Kerri has 31 DVDs and Blu-rays altogether. If she has more than half as many DVDs as Blu-rays, how many Blu-rays does Kerri have?

Example

Let $x =$ Sonia's age now
 $x - 3 =$ Melissa's age now
 Sonia is 3 years older than Melissa.
 The sum of their ages in 4 years will be 59 years. How old is Sonia now?

$$\underbrace{\text{Sonia in 4yr}} + \underbrace{\text{Melissa in 4yr}} = 59$$

$$(x + 4) + (x - 3 + 4) = 59$$