## What you will learn about: Problem-Solving Strategy

Use a Problem-Solving
Strategy to solve word
problems

Step1. Read the problem. Make sure all the words and ideas are understood.

Step 2. Identify what we are looking for.

Step 3. Name what we are looking for. Choose a variable to represent that quantity.

Step 4. Translate into an equation. It may be helpful to restate the problem in one sentence with all the important information. Then, translate the English sentence into an algebraic equation.

Step 5. Solve the equation using good algebra techniques.

Step 6. Check the answer in the problem and make sure it makes sense.

Step 7. Answer the question with a complete sentence.

Pilar bought a purse on sale for \$18, which is one-half the original price. What was the original price of the purse?

Joaquin bought a bookcase on sale for \$120, which was two-thirds of the original price. What was the original price of the bookcase?

$$\rho = \text{prisind Price}$$

$$\frac{3}{3} \left(\frac{2}{3}\rho\right) = (20)^{\frac{3}{3}}$$

$$\rho = 180$$

Gerry worked Sudoku puzzles and crossword puzzles this week. The number of Sudoku puzzles he completed seight more than twice the number of crossword puzzles. He completed 22 Sudoku puzzles. How many puzzles did he do? 22=26+8

X=22+7

## Solving number problems

## and

The differece of a number six is 13. Find the number.

The sum of twice a number and seven is 15. Find the number.

24=8 X=4

One number is five more than another. The sum of the nubmer is 21. Find X + X+5 = 21

One number is six more than another. The sum of the numbers is twentyfour. Find the numbers.

$$X + X + G = 24$$
  $X = 9$   
 $2x + G = 24$   $X + G = 15$   
 $2x = 18$ 

The sum of two numbers is -18. One number is 40 more than the other. Find the numbers.

$$X+X+40=-18$$
  $X=-2$ 

the numbers. 
$$X = -2$$
  
 $3x+3=-3$   $X+3x+3=-5$ 

The sum of two consectutive integers is 47. Find the numbers

$$X+X+1 = 47$$

The sum of two consectutive integers is 95. Find the number

X X+1 X+2	Find three conseutive integer
75 -14 -13	X+X+1X+2=-47 3x+3=-42
X X+1 X+2 -33 -52 -31	3x = -45 Find three consectutive integ $x + x + 1 + x + 2 = -4$
Even number  2x 2rd 2x 2x+2 2x+4 26 28 30 32,34,36	3x+3=-76 $3x=-76$ Find three consectutive even $2x+2x+2$ $6x+6=$ $6x=7$ $x=1$ Find three consectuve even in $2x+2x+2+3$ $6x+6$
42,000 3)126,000 12 06 4	A married couple togethe earliess than twice what her hush  X = hushand carns  Wife carns = 2x-  X+2x-  3x-/
	According to the National Au of a car in 2014 was \$28,500. 1975. What was the average
	6x-1500
	6×=
	V-

ers whose sum# is -42.

$$X+X+1X+2=-42$$
  $X=-15$   
 $3X+3=-42$   
 $3X=-45$ 

gers whose sum is -96.

$$(+x+1+x+2=-9) \qquad x=-33$$

$$3x+3=-76$$

$$3x=-69$$
hree consectutive even integers whose sum is 84.
$$2x+2x+2+2x+9=89$$

$$6x+6=89$$

$$6x=78$$

$$x=13$$
hree consectuve even intergers whose sum is 102.

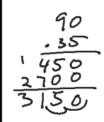
arns \$110,000 a year. The wife earns \$16,000 band earns. What does the husband earn?

$$X = hubband carns$$

Wife carns =  $2x - 16,000$ 
 $X + 2x - 16,000 = 110,000$ 
 $3x - 16,000 = 110,000$ 
 $3x - 16,000 = 110,000$ 

utomobile Dealers Association, the average cost ). This was \$1,500 less than 6 times the cost in e cost of a car in 1975?

## What you will learn about: Percent Problems



Tanslate and solve: What nmber is 35% of 90?

Tanslate and solve: What number is 45% of 80?

Translale and solve: 6.5% of what number is \$1.17?

Translate and solve: 7.5% of what number is \$1.95?

Translate and solve: 126 is what percent of 124 0