Period: Date: 4-1 thru 4-3

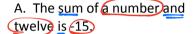
Chapter 4 Writing Equations

Writing Equations from Word Problems:

1. Read phrase/problem carefully.

- 2. Identify key words/operations and values/variables.
- 3. Define variables {let x = }
- 4. Translate into an equation.
- 5. Solve.
- 6. Verify to see if answer makes sense.
- 7. Answer word problems in a complete sentence including correct units.
- Key words: more than add reverse order less than subtract?
- twice 2x
- divided into divide
- is equal to
- of multiply

Ex. 1: Translate each sentence into a one-step equation. Solve and check your answer.



Let x = a number

$$x + 12 = -15$$

X = -7.7

D. Five less than a number is 20.

Let x = a number

$$X - 5 = 20$$

The number is 25

B. (35) is the difference of (25) and a number.

The number

is -10.

10+x=a number

$$35 = 25 - x$$

$$\frac{10 = -x}{-1} \quad x = -10$$

E. (Ten) is 6 fewer than a number.

let x = a number

The number is 16

C. The guotient of a number and negative five is (12.)

let x = a number

$$\frac{x}{-5} = -12$$

The number is 60.

$$x = 60$$

F. Forty two is the product of a number and negative 6.

Let x = a number

$$\frac{42}{-6} = \frac{-6x}{-6}$$

The number is -7.

Ex. 2: Translate each sentence into a two-step equation. Solve and check your answer.

A. Two times the sum of a number and five is 36.

$$2(x+3) - 36$$

$$2x + 10 = 36$$

$$\frac{-10 - 10}{2x = 26}$$

$$x = 13$$

The number is 13

B. The quotient of a number and

six increased by eleven is negative

$$\frac{x}{6} + || = -9$$

$$\frac{x}{6} + 11 = -9$$

The number is -120.

C. (Five more than twice) a number n is -25. Let n = a number

The number is -15.