

Worksheet 24.1 Write Equations for Word Problems

Directions: Complete the following problems on a separate sheet of paper.

- Convert the following statements into equations.
 - 5 added to a number is 9.
 - 3 subtracted from a number is equal to 12.
 - 5 times a number decreased by 2 is 4.
 - 2 times the sum of the number x and 7 is 13.
- A number is 12 more than the other. Find the numbers if their sum is 48.
- Twice the number decreased by 22 is 48. Find the number.
- Seven times the number is 36 less than 10 times the number. Find the number.
- The sum of two consecutive even numbers is 38. Find the numbers.
- The sum of three consecutive odd numbers is 51. Find the numbers.
- Rene is 6 years older than her younger sister. After 10 years, the sum of their ages will be 50 years. Find their present ages. (Hint: Make x younger sister's age now)
- The length of a rectangle is 10 cm more than its width. If the perimeter of rectangle is 80 cm, find the dimensions of the rectangle.

Lesson 24: Two-Variable Linear Equations

Worksheet 24.1 Write Equations for Word Problems Answers

Directions: Complete the following problems on a separate sheet of paper.

- Convert the following statements into equations.
 - 5 added to a number is 9. $n + 5 = 9$
 - 3 subtracted from a number is equal to 12. $n - 3 = 12$
 - 5 times a number decreased by 2 is 4. $5n - 2 = 4$
 - 2 times the sum of the number x and 7 is 13. $2(x + 7) = 8$
- A number is 12 more than the other. Find the numbers if their sum is 48.

$$n + n + 12 = 48$$

$$2n + 12 = 48$$

$$2n = 36$$

$$n = 18$$
 So, $n + 12 = 30$
- Twice the number decreased by 22 is 48. Find the number.

$$2n - 22 = 48$$

$$2n = 70$$

$$n = 35$$
- Seven times the number is 36 less than 10 times the number. Find the number.

$$7n = 10n - 36$$

$$36 = 3n$$

$$12 = n$$
- The sum of two consecutive even numbers is 38. Find the numbers.

$$n + n + 2 = 38$$

$$2n + 2 = 38$$

$$2n = 36$$

$$n = 18$$

$$n + 2 = 20$$
- The sum of three consecutive odd numbers is 51. Find the numbers.

$$n + n + 2 + n + 4 = 51$$

$$3n + 6 = 51$$

$$3n = 45$$

$$n = 15$$

$$n + 2 = 17$$

$$n + 6 = 19$$
- Rene is 6 years older than her younger sister. After 10 years, the sum of their ages will be 50 years. Find their present ages. (Hint: Make x younger sister's age now)

$$x + 10 + x + 6 + 10 = 50$$

$$2x + 26 = 50$$

$$2x = 24$$

$$x = 12 \text{ (younger sister)}$$

$$x + 6 = 18 \text{ (Rene)}$$
- The length of a rectangle is 10 cm more than its width. If the perimeter of rectangle is 80 cm, find the dimensions of the rectangle.

$$2w + 2(w + 10) = 80$$

$$2w + 2w + 20 = 80$$

$$4w + 20 = 80$$

$$4w = 60$$

$$w = 15 \text{ (width), } w + 10 = 25 \text{ (length)}$$