

Literal Equations – Worksheet #3

Solve each of the following equations for the variable “y”.

6) $2y = 4x + 10$

9) $-5y + 15 = 3x$

7) $2x + 4y = -22$

10) $18 = 3y - 12x$

8) $8y - 4x = 2$

11) $19 = 7x + y$

Solution of Equations Practice Problems

Solution: the value or values of a variable that make an equation a true statement

One Solution: the value of a single variable that make an equation a true statement

Example: $4(x+1)+3=19$ $4x+7=19$ $x=3$ TRUE so long as x is 3. False otherwise

No Solution: the value or values of a variable that make an equation an untrue or false statement

Example: $4(x+1)+3=20+4x$ $4x+7=20+4x$ $7=20$ FALSE

Infinite Many Solutions: the values of a variable that make an equation a true statement such that the expression on one side equals the expression on the other side of the equation.

Example: $4(x+1)+3=4x+7$ $4x+7=4x+7$ $4x=4x$ or $7=7$ or $0=0$ TRUE as **ANY** real number substituted for x will provide a TRUE statement

Solve each equation below and identify whether the equation has one solution, no solution, or infinite many solutions:

$$7x + 2 = -54$$

$$8x - 1 = 23 - 4x$$

$$11 + 3x - 7 = 6x + 5 - 3x$$

$$9 = 3(5x - 2)$$

$$6x + 5 - 2x = 4 + 4x + 1$$

$$6x - (3x + 8) = 16$$