

## Variables and Equations Assignment

Tell whether each equation is true, false, or open. Explain.

1.  $4t + 6 = 10$

2.  $14 - 7 = 27 - 21$

3.  $-11 + 4 = -7 + 15$

4.  $11 + 6 = 17$

5.  $5x - 9 = 14$

6.  $100 - 19 = 22$

Find the solution of each equation.

1.  $-8x + 4 = 12$

2.  $7 + (-5x) = -33$

3.  $4x = 21 + x$

Write an equation for each sentence.

1. The ratio of nine and a number  $y$  is equal to the square of a number  $x$ .

2. A number  $x$  more than seven is equal to the product of a number  $y$  and twenty.

3. The product of five and eight is equal to the product of twenty and a number  $y$ .

**Variables and Equations** Assignment**Answers**

Tell whether each equation is true, false, or open. Explain.

7.  $4t + 6 = 10$

variable  $t$ **OPEN**

8.  $14 - 7 = 27 - 21$

$7 = 7$

**TRUE**

9.  $-11 + 4 = -7 + 15$

$-7 \neq 8$

**FALSE**

10.  $11 + 6 = 17$

$17 = 17$

**TRUE**

11.  $5x - 9 = 14$

Variable  $x$ **OPEN**

12.  $100 - 19 = 22$

$81 \neq 22$

**FALSE**

Find the solution of each equation.

4.  $-8x + 4 = 12$

$-8x + 4 = 12$

$-8x = 12 - 4$

$-8x = 8$

**$x = -1$**

5.  $7 + (-5x) = -33$

$7 + (-5x) = -33$

$(-5x) = -33 - 7$

$-5x = -40$

**$x = 8$**

6.  $4x = 21 + x$

$4x = 21 + x$

$4x - x = 21$

$3x = 21$

**$x = 7$**

Write an equation for each sentence.

4. The ratio of nine and a number  $y$  is equal to the square of a number  $x$ .

**$\frac{9}{y} = x^2$**

5. A number  $x$  more than seven is equal to the product of a number  $y$  and twenty.

**$x + 7 = 20y$**

6. The product of five and eight is equal to the product of twenty and a number  $y$ .

**$5(8) = 20y$**