## 7th Grade Remote Learning Lesson 9:2-Step Equations



Solve the algebraic equation with variables on the same side of the equation.

- Example 2x - 3 = 52x - 3 = 52x - 3 + 3 = 5 + 3Add 3 to both sides. 2x = 8 $2x \div 2 = 8 \div 2$ Simplify. Divide both sides by 2. x = 4Simplify. x = 4 gives the solution of the equation 2x - 3 = 5. Check: Substitute the value of x = 4 into the original equation.  $2x - 3 = 2 \cdot 4 - 3$ = 5 When x = 4, the equation 2x - 3 = 5 is true. x = 4 gives the solution.

Solve each equation with variables on the same side.

1. 
$$4 - 12x = 20$$

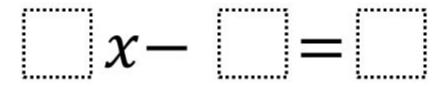
2. 
$$-5y - 5 = 10$$

Solve the algebraic equation with variables on the same side of the equation.

 $\frac{2}{5}x + \frac{1}{2} = 2$ Solve each equation with variables on the same side. Method 1 Solve by balancing the equation. 1.  $\frac{2}{5}x + \frac{1}{10} = \frac{1}{5}$  $\frac{2}{5}x + \frac{1}{2} = 2$  $\frac{2}{5}x + \frac{1}{2} - \frac{1}{2} = 2 - \frac{1}{2}$ Subtract  $\frac{1}{2}$  from both sides.  $\frac{2}{5}x = \frac{3}{2}$ Simplify. Multiply both sides by  $\frac{5}{2}$ , which is the  $\frac{5}{2} \cdot \left(\frac{2}{5}x\right) = \frac{5}{2} \cdot \left(\frac{3}{2}\right)$ 2.  $\frac{1}{8} - \frac{2}{3}w = \frac{3}{4}$ reciprocal of the coefficient  $\frac{2}{c}$ .  $x = \frac{15}{4}$ Simplify.

## TWO-STEP EQUATIONS 2

Directions: Using the digits 1 to 9 at most one time each, fill in the boxes to find the largest (or smallest) possible values for x.



More Practice: That Quiz