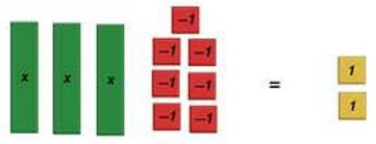
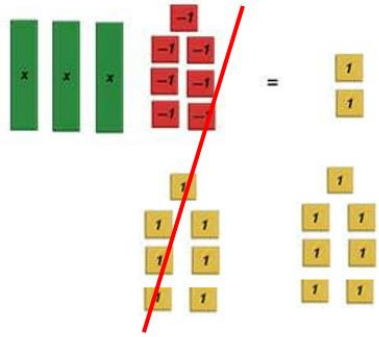
Possible Solutions

Using the equation, $3x - 7 = 2$, model the equation using a pictorial representation and then solve the equation.

Solution 1

Model and solve the equation 3x – 7 = 2.

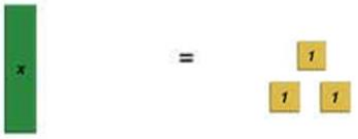




Isolate the variable by adding the opposite to both sides.

Simplify.

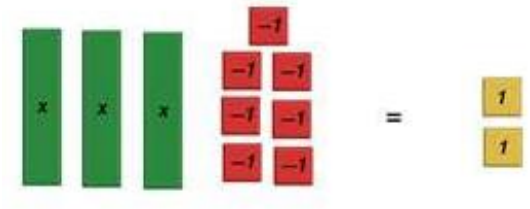
Combine like terms.



Divide to find the value for one *x*.

Solution 2

Model and solve the equation 3x – 7 = 2.



3x – 7 = 2 Add the opposite value to both sides of equal sign

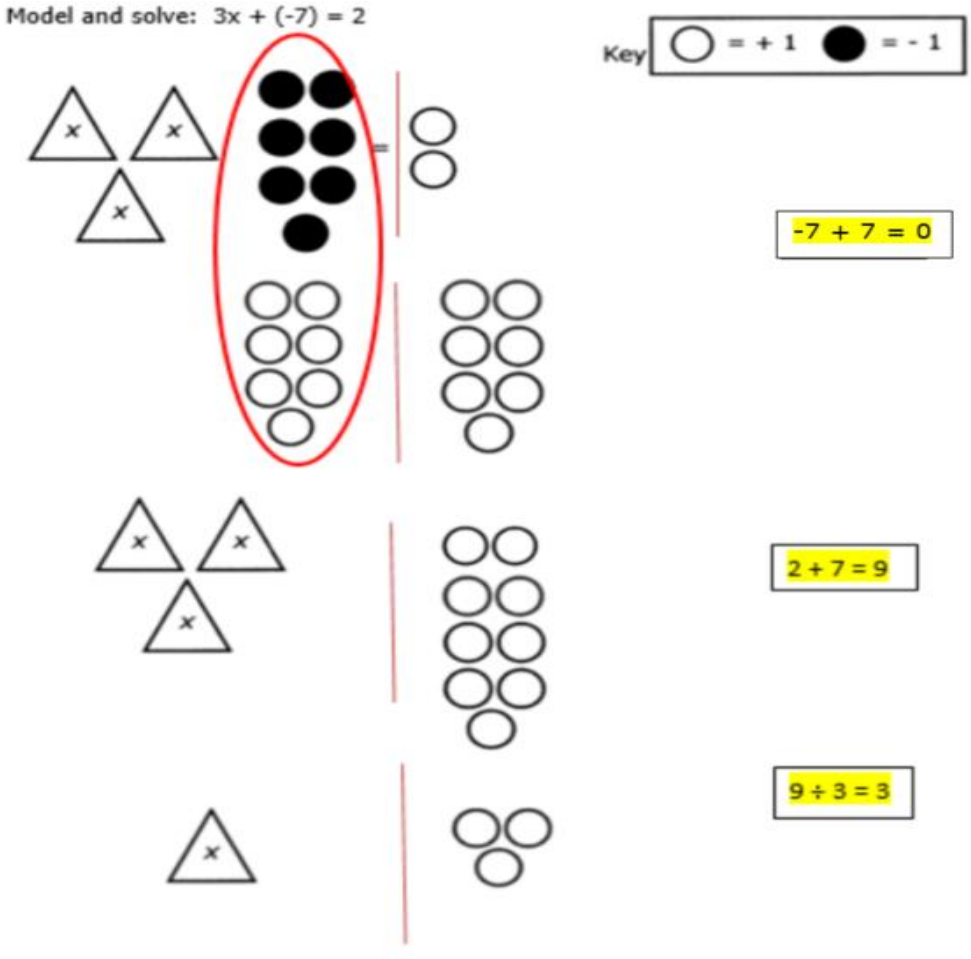
3x - 7 + 7 = 2 + 7 Simplify

3x = 9 Divide both sides by 3

$\frac{3x}{3} = \frac{9}{3}$ Simplify

x = 3

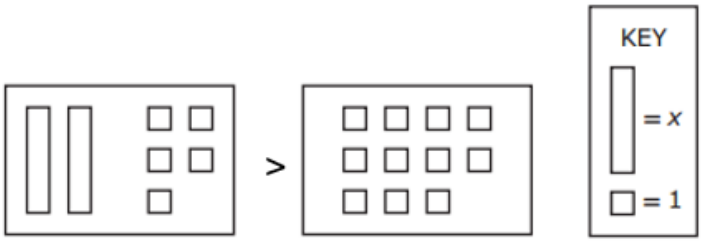
Solution 3



Solution 4

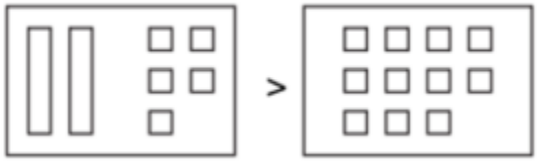
Use manipulatives such as Algebra tiles to model the inequality to solve for the variable.

The model below represents an inequality.



What values of x make this inequality true?

Write the inequality that is modeled and then solve for x.



$$2x + 5 > 11$$

$$2x + 5 - 5 > 11 - 5$$

$$2x > 6$$

$$\frac{2x}{2} > \frac{6}{2}$$

$$x > 3$$