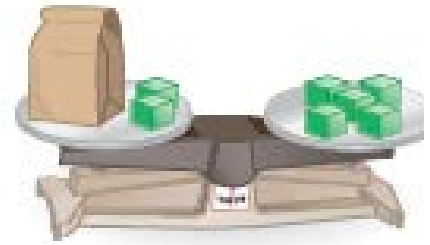


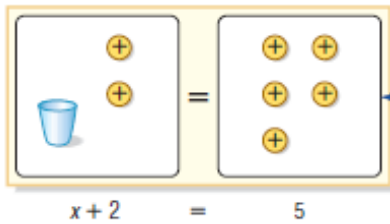
Solving One-Step Equations Using Models

In what way is a balanced scale like an equation?

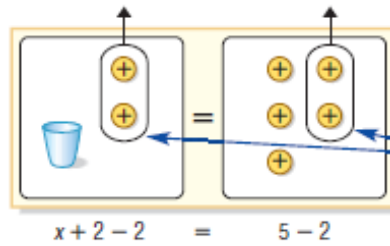


What does it mean to *solve an equation*?

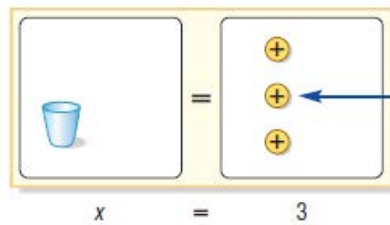
1 Solve $x + 2 = 5$ using models.



Model the equation.



Remove the same number of counters from each side of the mat until the cup is by itself on one side.

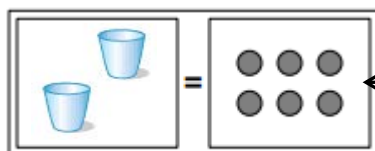


The number of counters remaining on the right side of the mat represents the value of x .

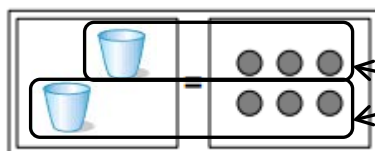
Therefore, $x = 3$. Since $3 + 2 = 5$, the solution is correct.

2

2 Solve $2x = 6$ using a model.



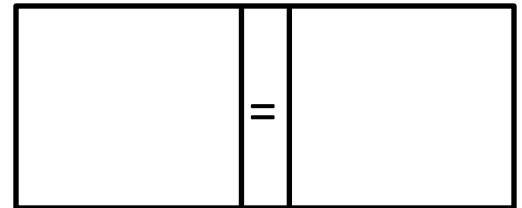
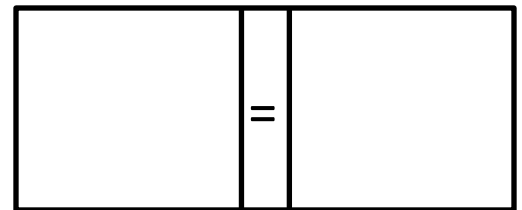
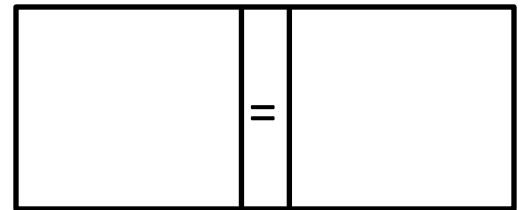
Model the equation.



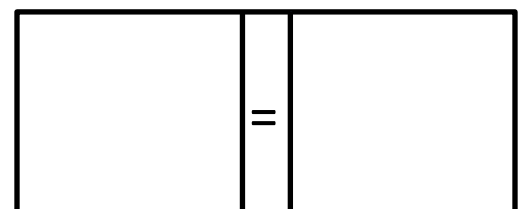
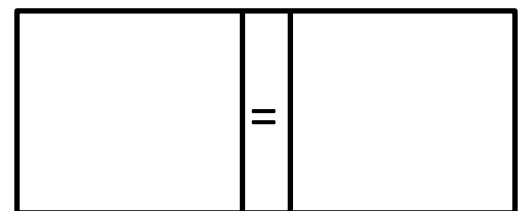
Arrange the counters into two equal groups to correspond to the two cups.

Therefore, $x = 3$, since $2 \times 3 = 6$

You Try: Solve $x + 5 = 9$ using a model.



You Try: Solve $2x = 8$ using a model.



Solve each equation using a model.

1. $x + 1 = 3$

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2. $x + 3 = 7$

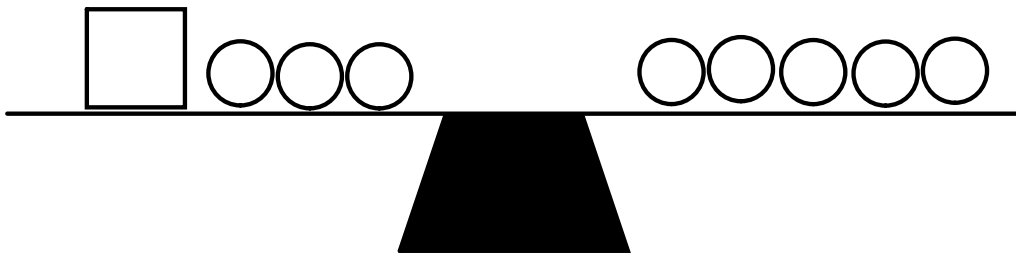
	=	
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3. $2x = 10$

	=	
--	---	--

4. $3x = 6$

	=	
--	---	--



$$\square = x \quad \bigcirc = 1$$

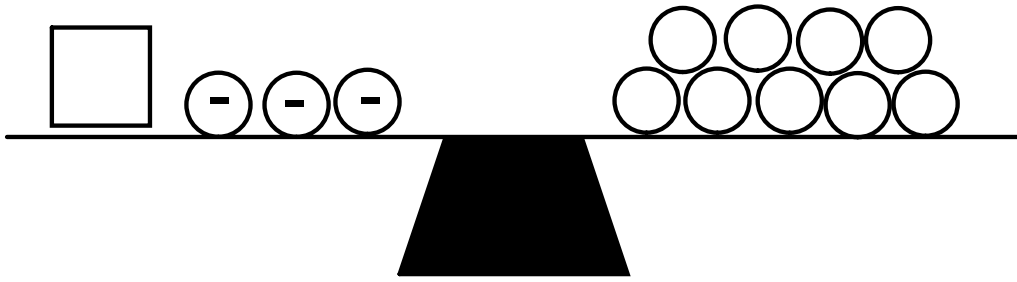
Write and solve an equation for the model above.



$$\square = x \quad \bigcirc = 1$$

Model and solve the equation:

$$x + 5 = 7$$



$$\square = x$$

$$\bigcirc = 1$$

$$\ominus = -1$$

Write and solve an equation for the model above.



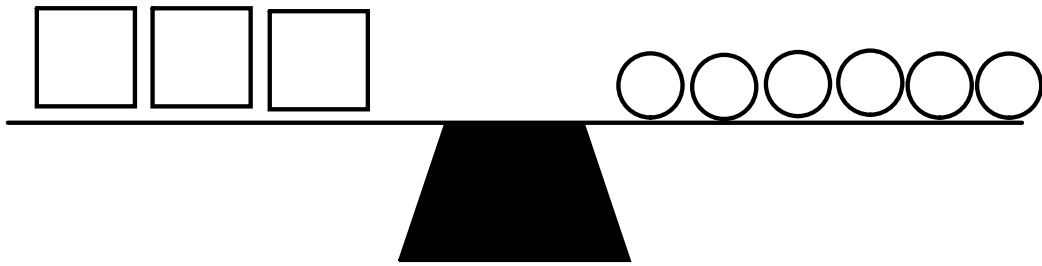
$$\square = x$$

$$\bigcirc = 1$$

$$\ominus = -1$$

Model and solve the equation:

$$x - 2 = 6$$



$$\square = x \quad \bigcirc = 1$$

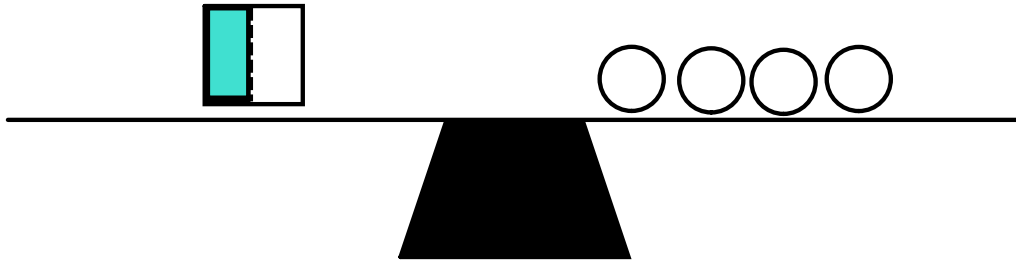
Write and solve an equation for the model above.



$$\square = x \quad \bigcirc = 1$$

Model and solve the equation:

$$4x = 12$$



$$\square = x \quad \bigcirc = 1$$

Write and solve an equation for the model above.



$$\square = x \quad \bigcirc = 1$$

Model and solve the equation:

$$\frac{x}{4} = 12$$