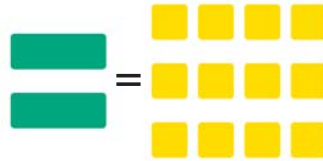


EXPLORE 2 Solve an equation using division

Solve $2x = 12$.

STEP 1 Model $2x = 12$ using algebra tiles.



STEP 2 There are two x -tiles, so divide the x -tiles and 1-tiles into two equal groups.

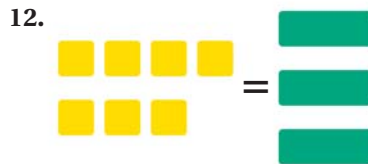


STEP 3 An x -tile is equal to six 1-tiles. So, the solution of $2x = 12$ is 6.



PRACTICE

Write the equation modeled by the algebra tiles.



Use algebra tiles to model and solve the equation.

13. $2x = 10$ 14. $3x = 12$ 15. $3x = 18$ 16. $4x = 16$
 17. $6 = 2x$ 18. $12 = 4x$ 19. $20 = 5x$ 20. $21 = 7x$

DRAW CONCLUSIONS Use your observations to complete these exercises

21. An equation and explanation that correspond to each step in Explore 1 are shown below. Copy and complete the equations and explanations.

$x + 2 = 5$	Original equation
$x + 2 - \underline{\quad ? \quad} = 5 - \underline{\quad ? \quad}$	Subtract $\underline{\quad ? \quad}$ from each side.
$x = \underline{\quad ? \quad}$	Simplify. Solution is $\underline{\quad ? \quad}$.

22. Write an equation that corresponds to the algebra tile equation in each step of Explore 2. Based on your results, describe an algebraic method that you can use to solve $12x = 180$. Then use your method to find the solution.