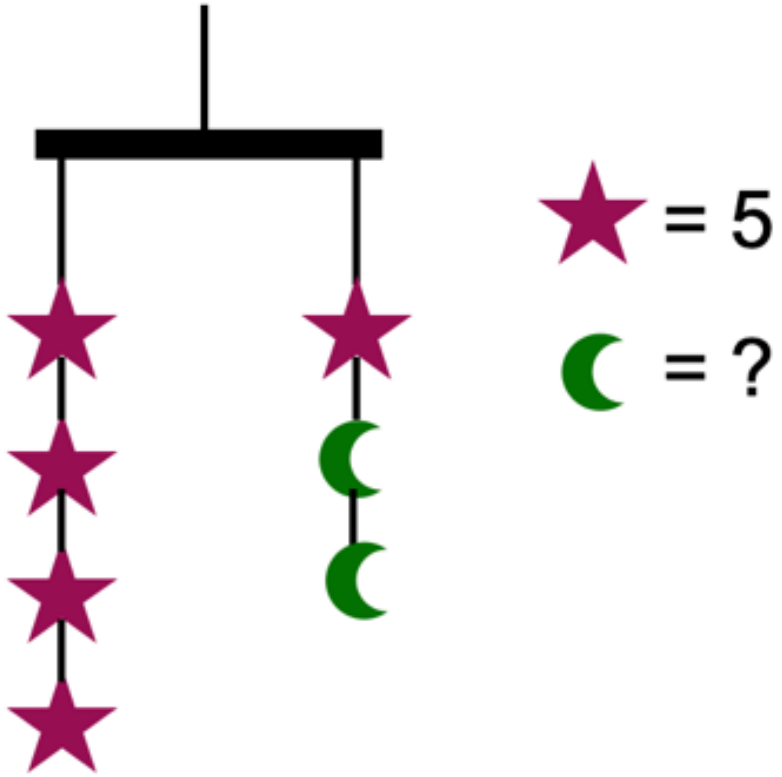
COASTMETRO
ELEMENTARY MATH PROJECT

GRADE 7 PRACTICE QUESTIONS

TWO-STEP EQUATIONS

GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

1. Use an algebraic equation to determine the value of the crescent moon. Show your thinking.

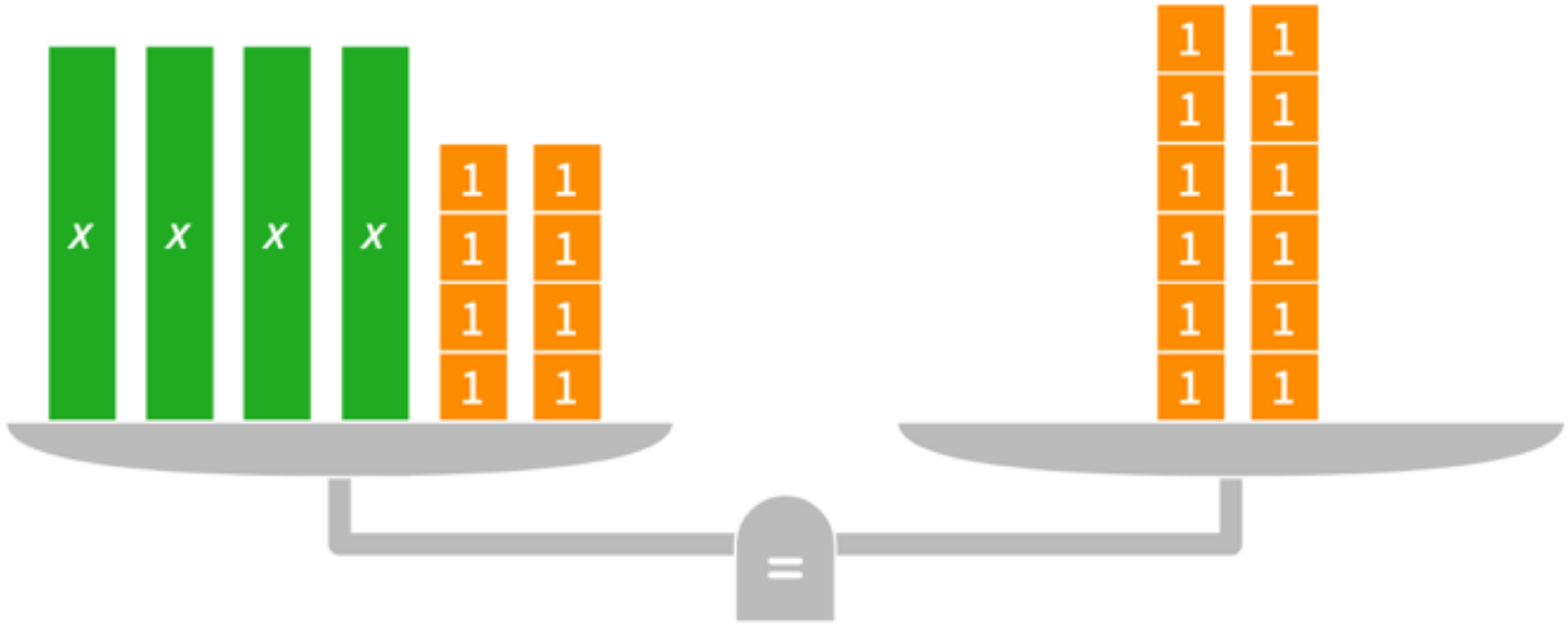


GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

2. Draw a picture to model the equation -3x + 7 = 19, using algebra tiles.

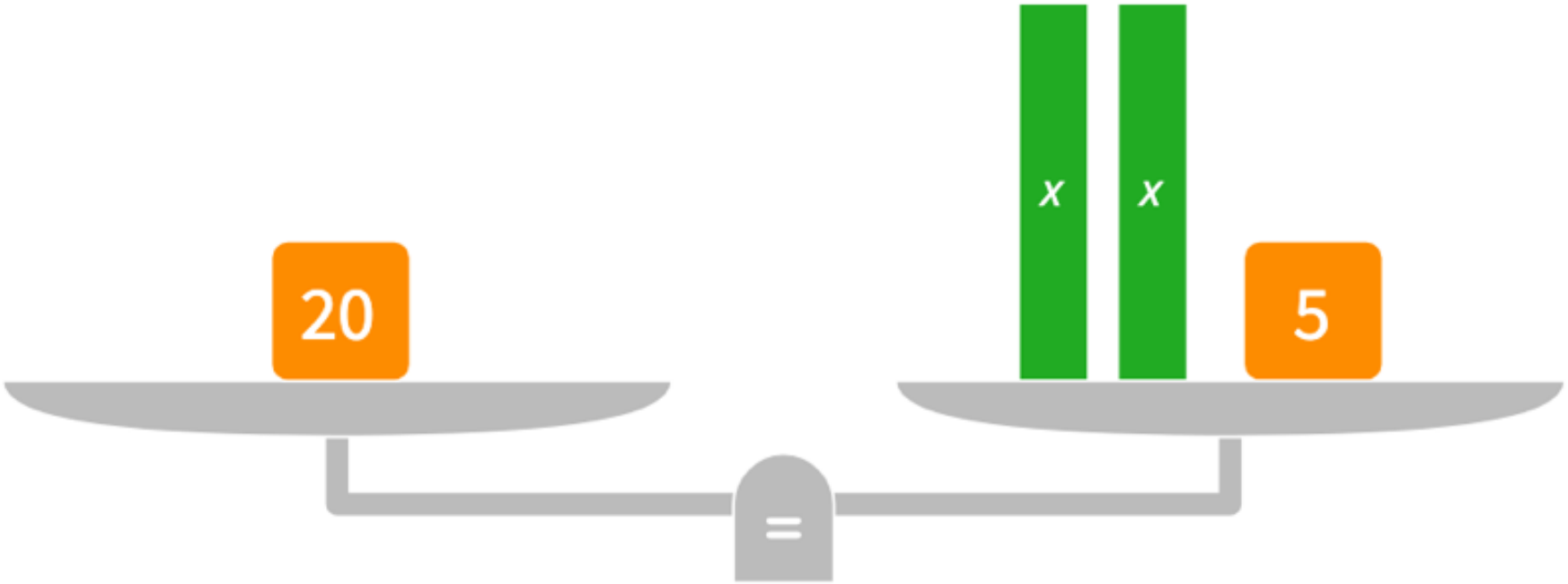
GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

3a. Solve the equation modelled by each balance scale. Show your thinking using pictures and numbers.



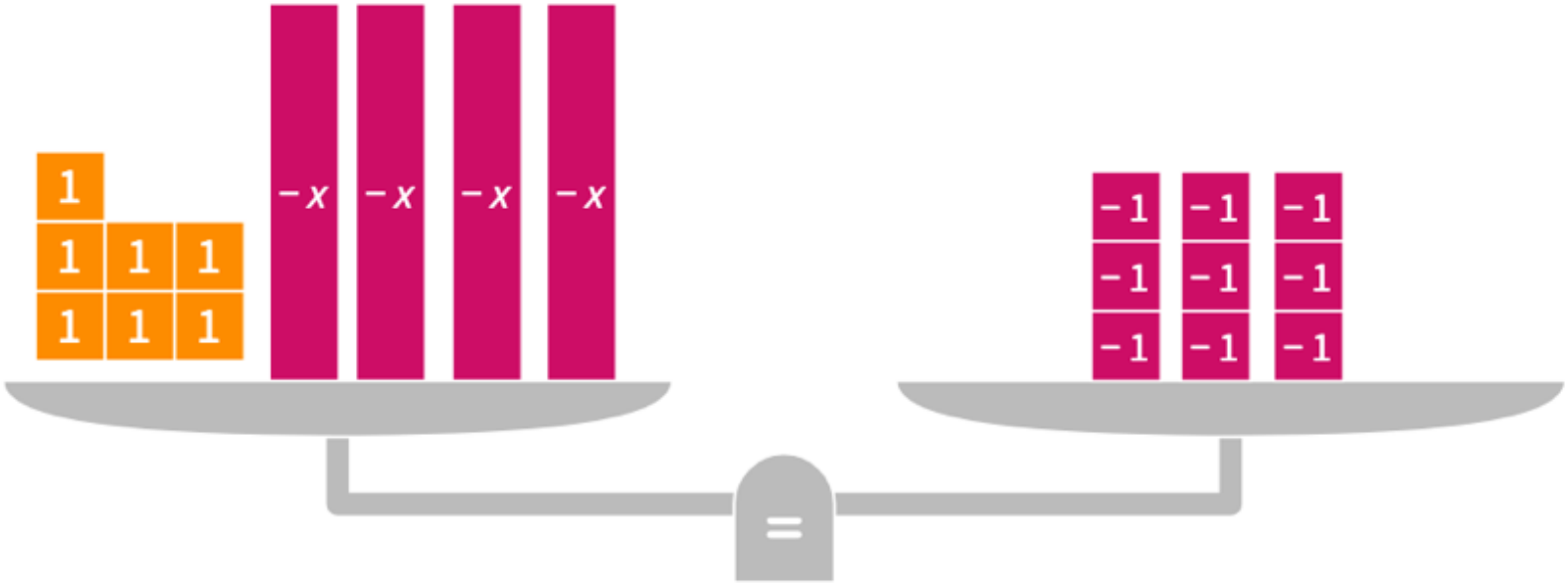
GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

3b. Solve the equation modelled by each balance scale. Show your thinking using pictures and numbers.



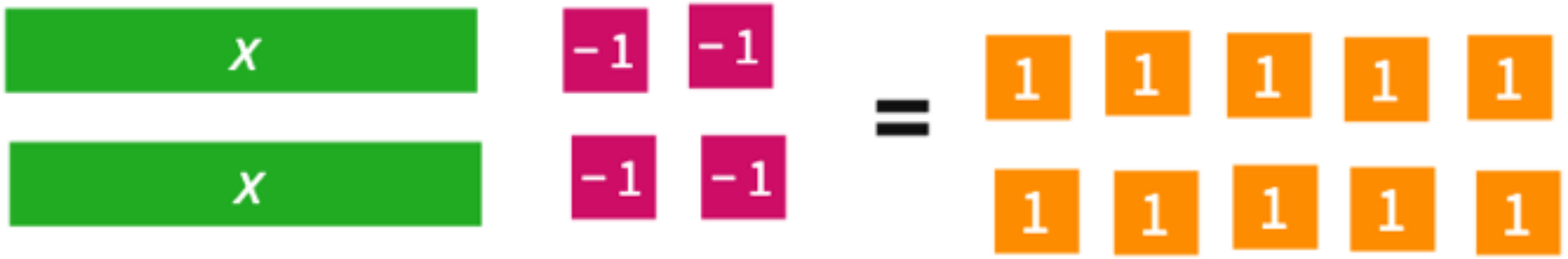
GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

3c. Solve the equation modelled by each balance scale. Show your thinking using pictures and numbers.



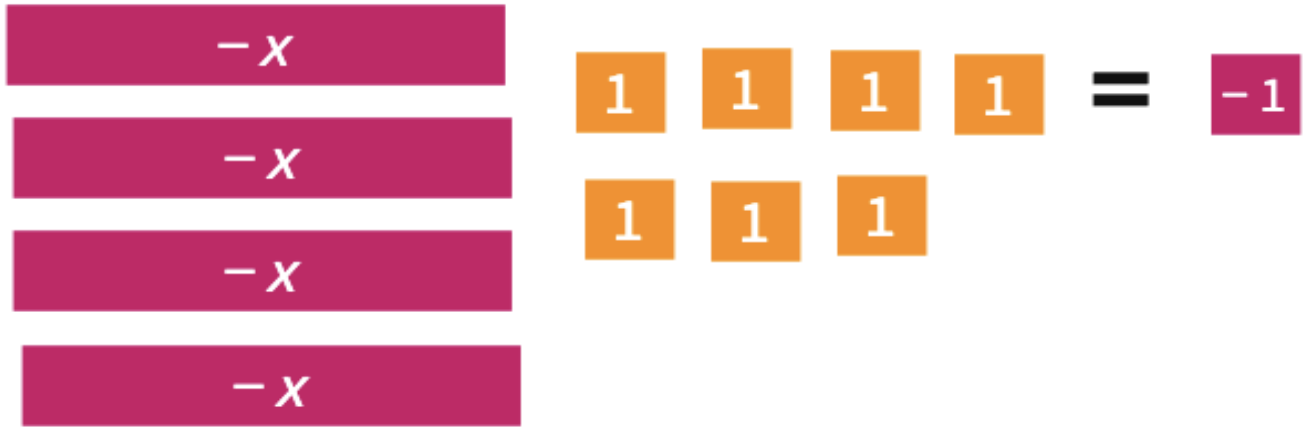
GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

4a. Use algebra tiles to solve the equations. Check each solution using symbols.



GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

4b. Use algebra tiles to solve the equations. Check each solution using symbols.



GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

4c. Use algebra tiles to solve the equations. Check each solution using symbols.

GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

5. Show whether x = -5 is the solution to each equation.

a) $-6x + 4 = 34$

b) $3 - 8x = 43$

c) $27 = -9x - 18$

d) $40 = 5x + 65$

GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

6. What is the first operation you should perform to solve each equation. Share your thinking.

a) $2x - 2 = 16$

b) $9 - 9y = -27$

c) $71 = -9x - 1$

GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

7. Use inverse operations to solve the equations. Show your steps and check your solutions.

a) $6x-4 = -32$

b) $22= -5x – 3$

c) $-30 = 7x – 9$

GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

8. Use inverse operations to solve the equations. Show your steps and check your solutions.

$$\frac{x}{5} - 7 = 1$$

$$\frac{y}{-3} + 4 = -6$$

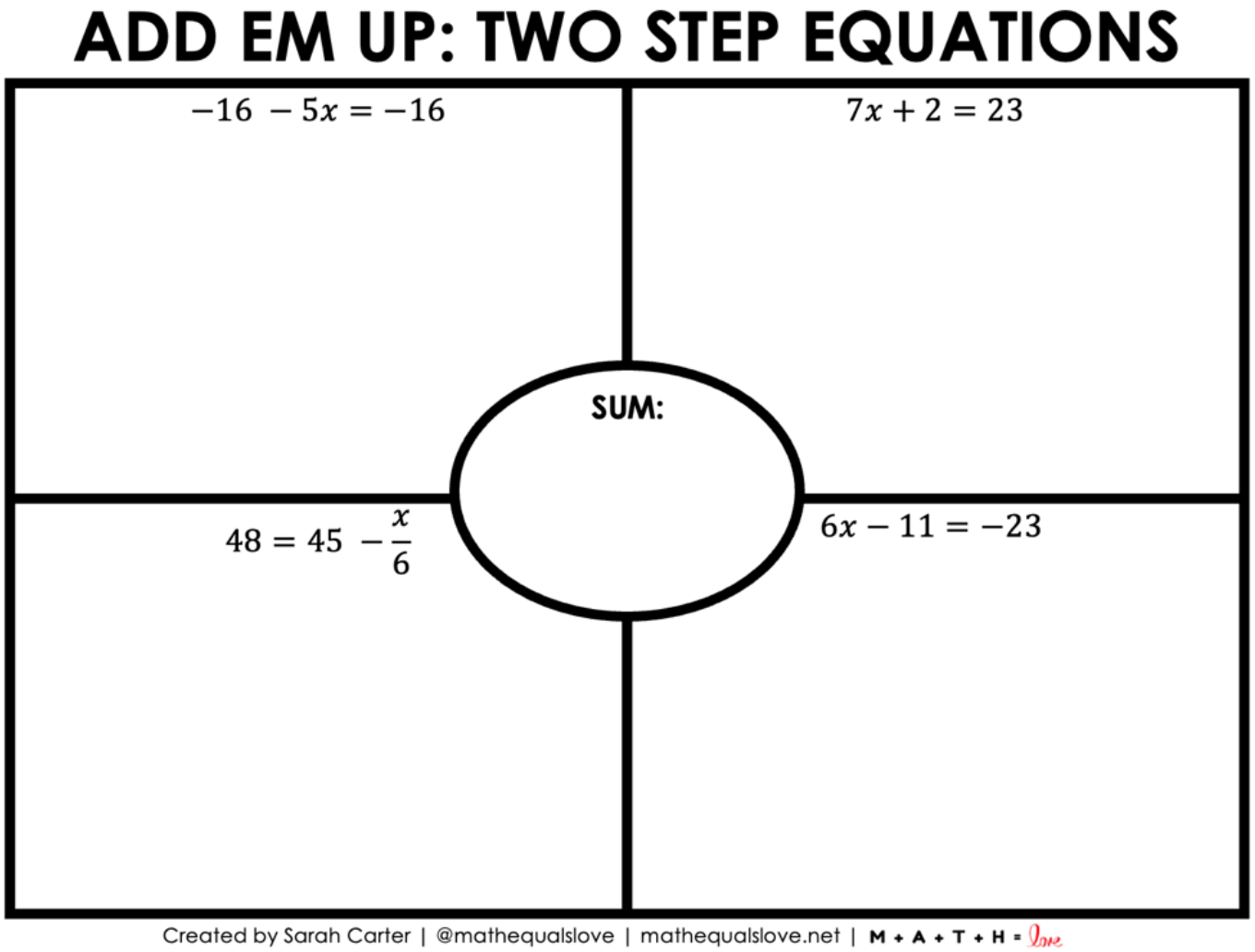
GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

9. Create word sentences.

Word Sentence	Equation
Three times a number plus two is ten.	$3x + 2 = 10$
	$3x = 9$
	$2x + 4 = 10$
	$9 = 5x - 27$
	$7 + 4x = 12$

GRADE 7 TWO-STEP EQUATIONS:
CLOSED QUESTIONS

10.



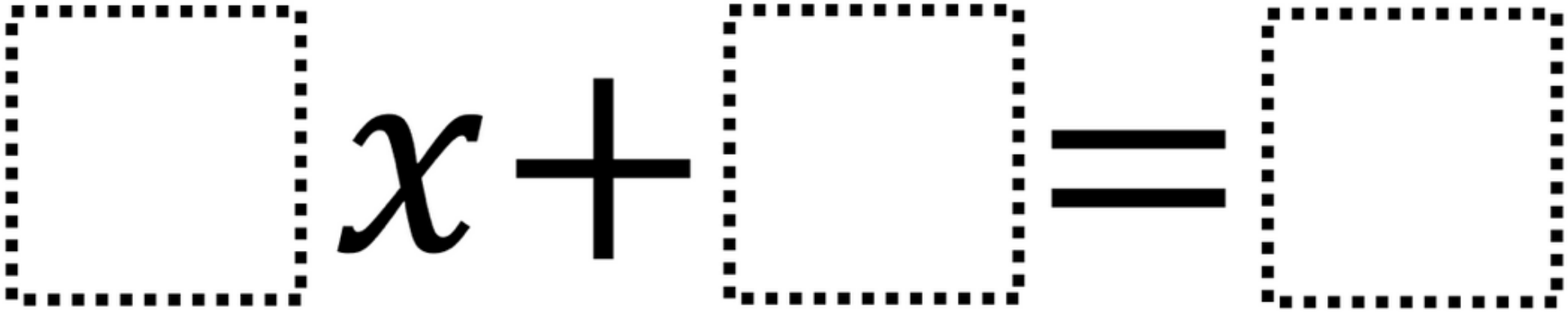
GRADE 7 TWO-STEP EQUATIONS:
OPEN QUESTIONS

11. You write the equation $4x - 5 = 15$ to solve a word problem. What might the word problem be?

GRADE 7 TWO-STEP EQUATIONS:
OPEN QUESTIONS

12. ## TWO-STEP EQUATIONS: POSITIVE AND NEGATIVE VALUES

Directions: Using the digits 1 to 9 at most one time each, place a digit in each box to create two equations: one where x has a positive value and one where x has a negative value. You may reuse all the digits for each equation.



GRADE 7 TWO-STEP EQUATIONS:
PROBLEMS

1. How many laps did the players run if the coach told them to run nine less than six times the number of laps they ran yesterday, and that total was 15?

GRADE 7 TWO-STEP EQUATIONS:
PROBLEMS

2. Lilly has two more than three times as many candies as Max. If she has 17 candies, how many does Max have?

GRADE 7 TWO-STEP EQUATIONS:
PROBLEMS

3. How many pencils are there if, five times the number of pencils plus nine equals thirty-four.

GRADE 7 TWO-STEP EQUATIONS:
PROBLEMS

4. If Marcus triples the amount of money he has now, and then spends $75, he will have just enough left to buy a new laptop that costs $450. Write and solve an equation to determine how much money Marcus has now.

GRADE 7 TWO-STEP EQUATIONS:
PROBLEMS

5. If a number is doubled and five is subtracted from the product, the result is nine. What is the number?