

Equation Story Codes

Use expressions and equations to show relationships.

GRADE 6 • TEKS 6.1.E

6.1.E "create and use representations to organize, record, and communicate mathematical ideas;"

NAME _____

DATE _____

SHOW THE RELATIONSHIP

An expression shows a quantity or calculation. An equation shows that two amounts are equal. Choose x for an unknown, then use operations and an equal sign to record the situation clearly.

WORKED EXAMPLE

A club has 19 markers after getting 7 more markers. Let x represent the number of markers the club had before getting more. Write and solve an equation.

1. Let x represent the starting number of markers.
2. Write the equation: $x + 7 = 19$.
3. Subtract 7 from both sides: $x = 12$.

Answer: $x = 12$

PRACTICE 6 problems

- 1** Let x represent the number of stickers you have. Write an expression for the number of stickers after you give away 9 stickers.

ANSWER _____

- 2** Let x represent the price of one keychain. Write an expression for the cost of 5 keychains.

ANSWER _____

- 3** Write an equation for this statement: A number x divided by 4 is 8.

ANSWER _____

- 4** A number x increased by 13 is 31. Write an equation.

ANSWER _____

- 5** Six equal bags hold 54 marbles. Let x be the number of marbles in each bag. Write and solve an equation.

ANSWER _____

- 6** A number x is 5 less than 18. Write and solve an equation.

ANSWER _____

APPLY IT Show your work

- 1** At a gaming event, Jada starts with \$35. Each snack costs \$6. She has \$11 left after buying x snacks. Write and solve an equation to find x .

WORK SPACE

ANSWER _____

- 2** A dance video earns 9 new likes each hour. After x hours, it has earned 45 new likes. Write and solve an equation to find x .

WORK SPACE

ANSWER _____

CHALLENGE One step up

A team orders 4 identical T-shirts that cost x dollars each. The team also pays \$9 for shipping. The total cost is \$33. Write and solve an equation. Then explain what $4x$ and 9 represent.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Let x represent the number of stickers you have. Write an expression for the number of stickers after you give away 9 stickers.	$x - 9$
2	Let x represent the price of one keychain. Write an expression for the cost of 5 keychains.	$5x$
3	Write an equation for this statement: A number x divided by 4 is 8.	$x/4 = 8$
4	A number x increased by 13 is 31. Write an equation.	$x + 13 = 31$
5	Six equal bags hold 54 marbles. Let x be the number of marbles in each bag. Write and solve an equation.	$6x = 54$; $x = 9$
6	A number x is 5 less than 18. Write and solve an equation.	$x + 5 = 18$; $x = 13$

PART 2 • APPLY IT

- $35 - 6x = 11$; $x = 4$ snacks** Subtracting the cost of x snacks from \$35 leaves \$11. Solve $35 - 6x = 11$ to find that Jada bought 4 snacks.
- $9x = 45$; $x = 5$ hours** Multiply the 9 likes per hour by x hours. Solve $9x = 45$ to find that the video earned likes for 5 hours.

CHALLENGE

$4x + 9 = 33$; $x = 6$. $4x$ represents the cost of 4 T-shirts, and 9 represents the shipping cost.

Accept equivalent equation forms that correctly represent each situation, such as $54 = 6x$. For solved equations, accept a correct equation and solution even if the equation is written with the equal sides reversed.