

Lesson 8-2

Reinforce Understanding

Write and Solve Equations Using Addition or Subtraction

I can solve one-step addition and subtraction equations using inverse operations.

Worked model

A shop had x hats. After 17 hats were delivered, the shop had 45 hats. Solve $x + 17 = 45$.

1. Look at the variable side: 17 is added to x , so the inverse move is subtraction.
2. Subtract 17 from BOTH sides so the equation stays balanced.
3. Left side: $x + 17 - 17$ leaves x . Right side: $45 - 17$ gives 28.
4. Check by substituting: $28 + 17$ makes 45, so both sides agree.

Answer: $x = 28$, so the shop had 28 hats before the delivery.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Use the number line to solve $x + 8 = 20$. Start at 20 and count back 8 to find x .

Mark and label each value on the number line.

Show your thinking

2. Solve: $x + 9 = 15$

Circle the letter of the best answer. Show how you know.

- A. $x = 6$
- B. $x = 9$
- C. $x = 15$
- D. $x = 24$

Show your work

3. Solve: $y - 7 = 20$

Circle the letter of the best answer. Show how you know.

- A. $y = 7$
- B. $y = 13$
- C. $y = 27$
- D. $y = 140$

Show your work
