Lesson 26: One-Step Equations—Addition and Subtraction

Classwork

Exercise 1

Solve each equation. Use both tape diagrams and algebraic methods for each problem. Use substitution to check your answers.

a. $b + 9 = 15$

b. $12 = 8 + c$

Exercise 2

Given the equation $d - 5 = 7$:

a. Demonstrate how to solve the equation using tape diagrams.

b. Demonstrate how to solve the equation algebraically.

c. Check your answer.

Exercise 3

Solve each problem, and show your work. You may choose which method (tape diagrams or algebraically) you prefer. Check your answers after solving each problem.

a. $e + 12 = 20$

b. $f - 10 = 15$

c. $g - 8 = 9$

Problem Set

1. Find the solution to the equation below using tape diagrams. Check your answer.

$$m - 7 = 17$$

2. Find the solution of the equation below algebraically. Check your answer.

$$n + 14 = 25$$

3. Find the solution of the equation below using tape diagrams. Check your answer.

$$p + 8 = 18$$

4. Find the solution to the equation algebraically. Check your answer.

$$g - 62 = 14$$

5. Find the solution to the equation using the method of your choice. Check your answer.

$$m + 108 = 243$$

6. Identify the mistake in the problem below. Then, correct the mistake.

$$\begin{aligned} p - 21 &= 34 \\ p - 21 - 21 &= 34 - 21 \\ p &= 13 \end{aligned}$$

7. Identify the mistake in the problem below. Then, correct the mistake.

$$\begin{aligned} q + 18 &= 22 \\ q + 18 - 18 &= 22 + 18 \\ q &= 40 \end{aligned}$$

8. Match the equation with the correct solution on the right.

$r + 10 = 22$	$r = 10$
$r - 15 = 5$	$r = 20$
$r - 18 = 14$	$r = 12$
$r + 5 = 15$	$r = 32$