

## Lesson 26: One-Step Equations—Addition and Subtraction

### Classwork

#### Exercise 1

Solve each equation. Use substitution to check your answers.

a.  $b + 9 = 15$

$$\begin{array}{r} b + 9 = 15 \\ -9 \quad -9 \\ \hline b = 6 \end{array}$$

Check:

$$b + 9 = 15$$

$$6 + 9 = 15$$

$$15 = 15 \quad \checkmark$$

b.  $12 = 8 + c$

**Exercise 2**

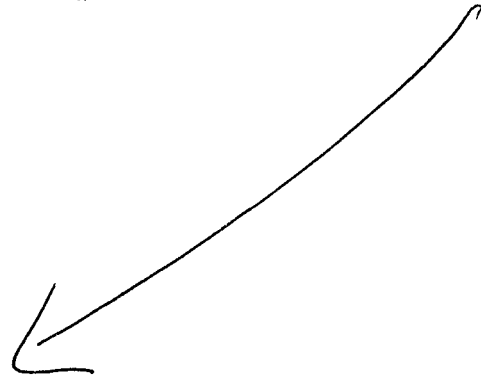
Given the equation  $d - 5 = 7$ :

a. Demonstrate how to solve the equation algebraically.

$$\begin{array}{r} d - 5 = 7 \\ + 5 \quad + 5 \\ \hline d = 12 \end{array}$$

$$\begin{array}{l} d - 5 = 7 \\ 12 - 5 = 7 \\ \checkmark \\ 7 = 7 \checkmark \end{array}$$

b. 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.  $g - 8 = 9$

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

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

$$\begin{array}{r} p - 21 = 34 \\ + 21 \quad \quad + 21 \\ \hline p = 55 \end{array}$$

Check:  $p - 21 = 34$

They subtracted 21 instead of using the inverse of adding 21.

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

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

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

$$r + 10 = 22$$

$$r = 10$$

$$r - 15 = 5$$

$$r = 20$$

$$r - 18 = 14$$

$$r = 12$$

$$r + 5 = 15$$

$$r = 32$$

