

# 1.1 Exercises

## Vocabulary and Core Concept Check

- VOCABULARY** Which of the operations  $+$ ,  $-$ ,  $\times$ , and  $\div$  are inverses of each other?
- VOCABULARY** Are the equations  $-2x = 10$  and  $-5x = 25$  equivalent? Explain.
- WRITING** Which property of equality would you use to solve the equation  $14x = 56$ ? Explain.
- WHICH ONE DOESN'T BELONG?** Which expression does not belong with the other three? Explain your reasoning.

$$8 = \frac{x}{2}$$

$$3 = x \div 4$$

$$x - 6 = 5$$

$$\frac{x}{3} = 9$$

## Monitoring Progress and Modeling with Mathematics

In Exercises 5–14, solve the equation. Justify each step. Check your solution. (See Example 1.)

- $x + 5 = 8$
- $m + 9 = 2$
- $y - 4 = 3$
- $s - 2 = 1$
- $w + 3 = -4$
- $n - 6 = -7$
- $-14 = p - 11$
- $0 = 4 + q$
- $r + (-8) = 10$
- $t - (-5) = 9$

- MODELING WITH MATHEMATICS** A discounted amusement park ticket costs \$12.95 less than the original price  $p$ . Write and solve an equation to find the original price.

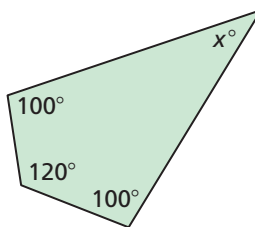


- MODELING WITH MATHEMATICS** You and a friend are playing a board game. Your final score  $x$  is 12 points less than your friend's final score. Write and solve an equation to find your final score.

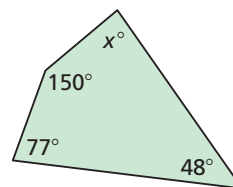
	ROUND 9	ROUND 10	FINAL SCORE
Your Friend	22	12	195
You	9	25	?

**USING TOOLS** The sum of the angle measures of a quadrilateral is  $360^\circ$ . In Exercises 17–20, write and solve an equation to find the value of  $x$ . Use a protractor to check the reasonableness of your answer.

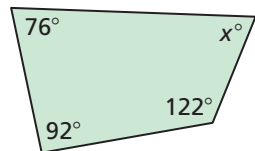
17.



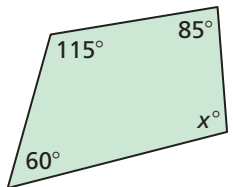
18.



19.



20.



In Exercises 21–30, solve the equation. Justify each step. Check your solution. (See Example 2.)

- $5g = 20$
- $4q = 52$
- $p \div 5 = 3$
- $y \div 7 = 1$
- $-8r = 64$
- $x \div (-2) = 8$
- $\frac{x}{6} = 8$
- $\frac{w}{-3} = 6$
- $-54 = 9s$
- $-7 = \frac{t}{7}$