

# 1.1

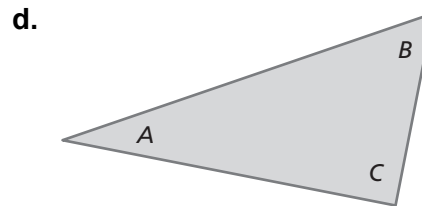
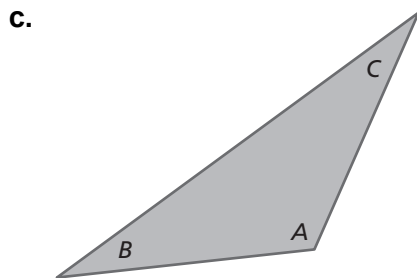
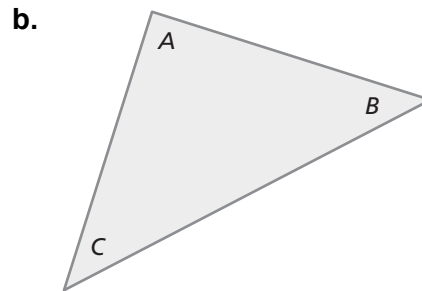
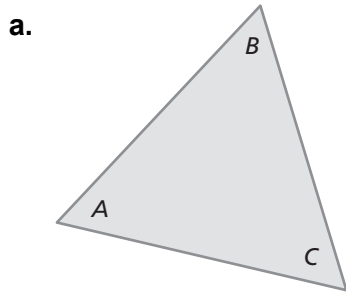
## Solving Simple Equations

For use with Activity 1.1

**Essential Question** How can you use inductive reasoning to discover rules in mathematics? How can you test a rule?

### 1 ACTIVITY: Sum of the Angles of a Triangle

Work with a partner. Use a protractor to measure the angles of each triangle. Complete the table to organize your results.



Triangle	Angle A (degrees)	Angle B (degrees)	Angle C (degrees)	$A + B + C$
a.				
b.				
c.				
d.				

**1.1 Solving Simple Equations (continued)**

**2 ACTIVITY:** Writing a Rule

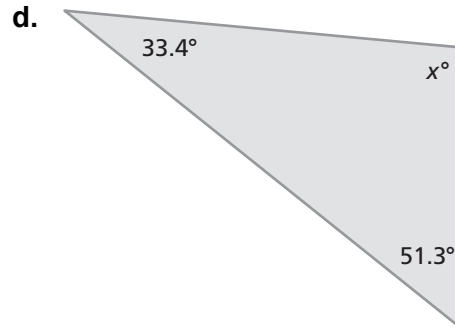
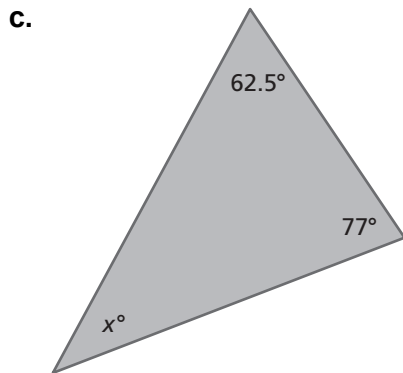
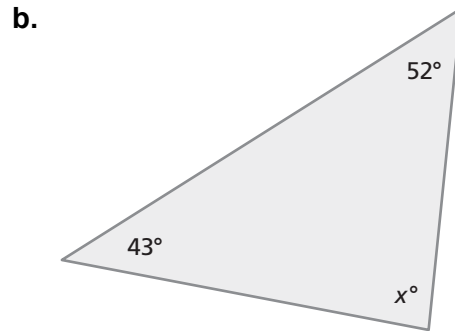
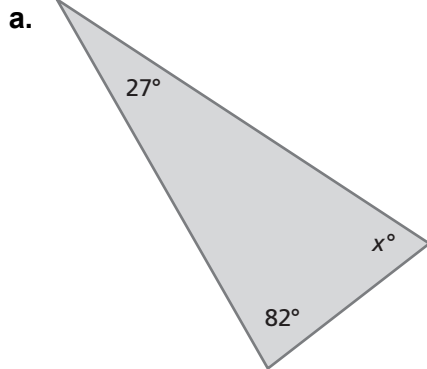
Work with a partner. Use **inductive reasoning** to write and test a rule.

a. **STRUCTURE** Use the completed table in Activity 1 to write a rule about the sum of the angle measures of a triangle.

b. **TEST YOUR RULE** Draw four triangles that are different from those in Activity 1. Measure the angles of each triangle. Organize your results in a table. Find the sum of the angle measures of each triangle.

**1.1 Solving Simple Equations (continued)****3 ACTIVITY:** Applying Your Rule

Work with a partner. Use the rule you wrote in Activity 2 to write an equation for each triangle. Then solve the equation to find the value of  $x$ . Use a protractor to check the reasonableness of your answer.

**What Is Your Answer?**

4. **IN YOUR OWN WORDS** How can you use inductive reasoning to discover rules in mathematics? How can you test a rule? How can you use a rule to solve problems in mathematics?

**1.1****Practice**

For use after Lesson 1.1

Solve the equation. Check your solution.

1.  $x + 5 = 16$

2.  $11 = w - 12$

3.  $\frac{3}{4} + z = \frac{5}{6}$

4.  $3y = 18$

5.  $\frac{k}{7} = 10$

6.  $\frac{4}{5}n = \frac{9}{10}$

7.  $x - 12 \div 6 = 9$

8.  $h + |-8| = 15$

9.  $1.3(2) + p = 7.9$

10. A coupon subtracts \$5.16 from the price  $p$  of a shirt. You pay \$15.48 for the shirt after using the coupon. Write and solve an equation to find the original price of the shirt.