

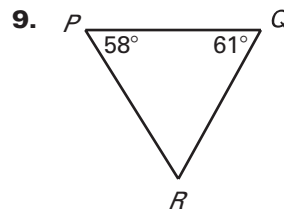
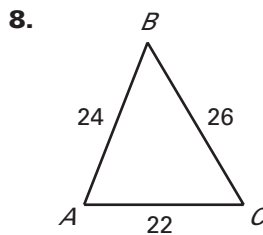
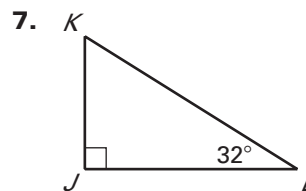
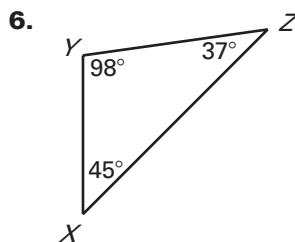
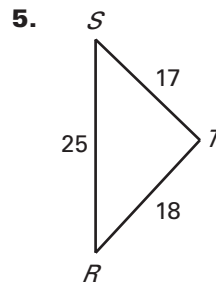
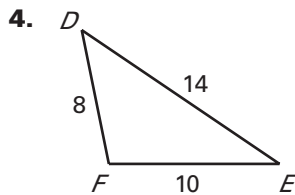
LESSON
5.5**Practice B**

For use with pages 328–334

Use a ruler and protractor to draw the given type of triangle. Mark the largest angle and longest side in red and the smallest angle and shortest side in blue. What do you notice?

1. Obtuse scalene 2. Acute isosceles 3. Right isosceles

List the sides and the angles in order from smallest to largest.



Sketch and label the triangle described.

10. Side lengths: 14, 17, and 19, with longest side on the bottom
Angle measures: 45° , 60° , and 75° , with smallest angle at the right
11. Side lengths: 11, 18, and 24, with shortest side on the bottom
Angle measures: 25° , 44° , and 111° , with largest angle at the left
12. Side lengths: 32, 34, and 48, with shortest side arranged vertically at the right.
Angle measures: 42° , 45° , and 93° , with largest angle at the top.

Is it possible to construct a triangle with the given side lengths? If not, explain why not.

13. 3, 4, 5 14. 1, 4, 6 15. 17, 17, 33
16. 22, 26, 65 17. 6, 43, 39 18. 7, 54, 45

LESSON
5.5**Practice B** *continued*
For use with pages 328–334

Describe the possible lengths of the third side of the triangle given the lengths of the other two sides.

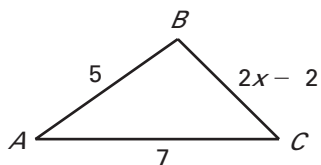
19. 6 in., 9 in. 20. 4 ft, 12 ft 21. 9 m, 18 m
22. 21 yd, 16 yd 23. 22 in., 2 ft 24. 24 in., 1 yd

Is it possible to build a triangle using the given side lengths? If so, order the angle measures of the triangle from least to greatest.

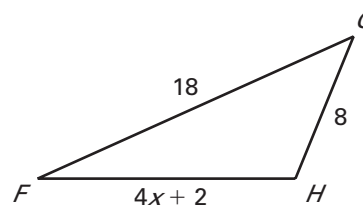
25. $RS = \sqrt{46}$, $ST = 3\sqrt{5}$, $RT = 5$ 26. $AB = \sqrt{26}$, $BC = 4\sqrt{5}$, $AC = 2\sqrt{2}$

Describe the possible values of x .

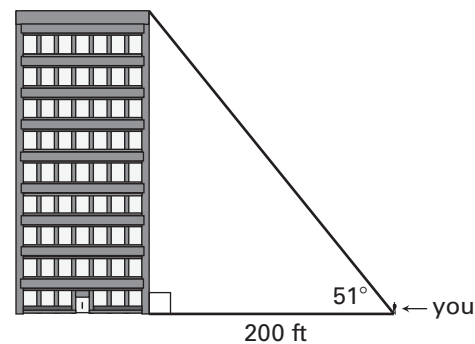
27.



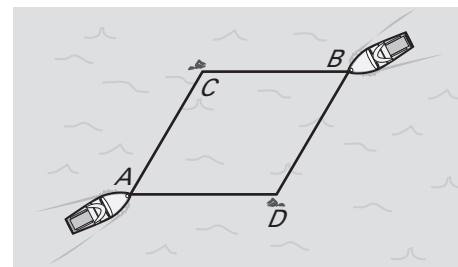
28.



29. **Building** You are standing 200 feet from a tall building. The angle of elevation from your feet to the top of the building is 51° (as shown in the figure). What can you say about the height of the building?



30. **Sea Rescue** The figure shows the relative positions of two rescue boats and two people in the water. Talking by radio, the captains use certain angle relationships to conclude that boat A is the closest to person C and boat B is the closest to person D . Describe the angle relationships that would lead to this conclusion.



31. **Airplanes** Two airplanes leave the same airport heading in different directions. After 2 hours, one airplane has traveled 710 miles and the other has traveled 640 miles. Describe the range of distances that represents how far apart the two airplanes can be at this time.
32. **Baseball** A pitcher throws a baseball 60 feet from the pitcher's mound to home plate. A batter pops the ball up and it comes down just 24 feet from home plate. What can you determine about how far the ball lands from pitcher's mound? Explain why the Triangle Inequality Theorem can be used to describe all but the shortest and longest possible distances.