Name_____ Date _____

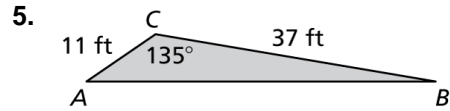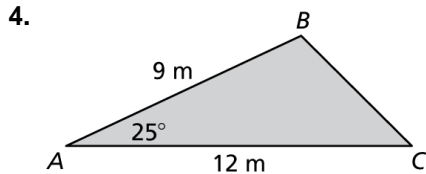## 9.7 Practice A

In Exercises 1–3, use a calculator to find the trigonometric ratio. Round your answer to four decimal places.

1. $\cos 115°$

2. $\tan 95°$

3. $\sin 148°$
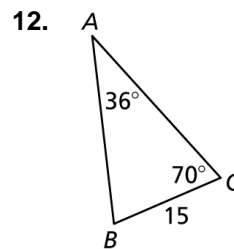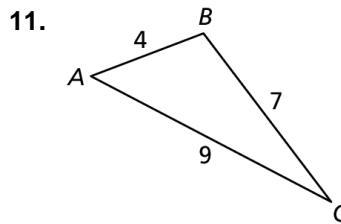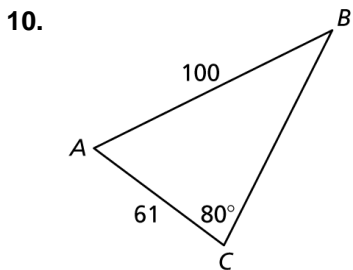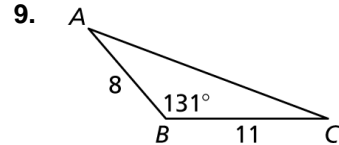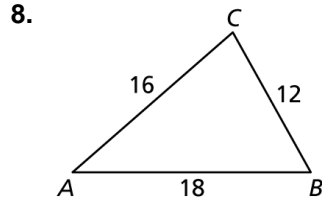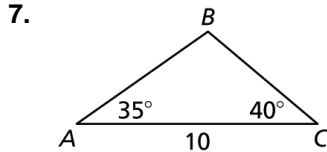
In Exercises 4 and 5, find the area of the triangle. Round your answer to the nearest tenth.
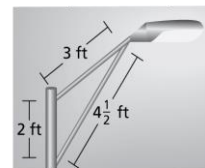
4.

5.

6. Place each triangle case into one of the three categories according to the first step in solving the triangle.

Law of Sines	Law of Cosines	Neither

AAA   AAS   ASA   SSS   SSA   SAS

In Exercises 7–12, solve the triangle. Round decimal answers to the nearest tenth.

7.

8.

9.

10.

11.

12.

13. Determine the measure of angle *A* in the design of the streetlamp shown in the diagram.
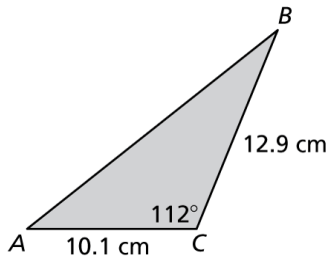
9.7 Practice B

In Exercises 1–3, use a calculator to find the trigonometric ratio. Round your answer to four decimal places.
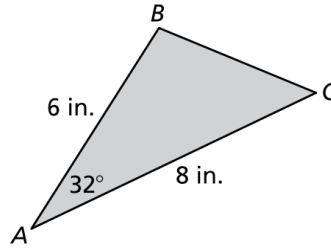
1. $\tan 133°$ 2. $\cos 128°$ 3. $\sin 91°$

In Exercises 4 and 5, find the area of the triangle. Round your answer to the nearest tenth.

4.

B

12.9 cm

112°

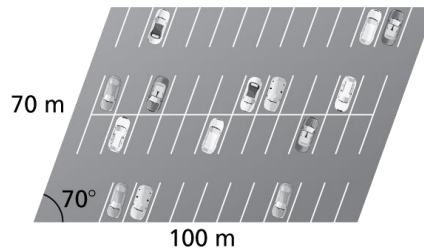*A*   10.1 cm   *C*
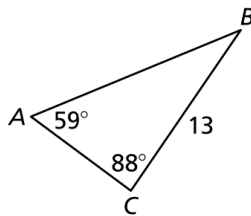
5.

B

6 in.

32°   8 in.

C

A

6. A parking lot has the shape of a parallelogram, as shown. Explain how you can find the area of the parking lot without using right triangles. Then find the area of the parking lot.
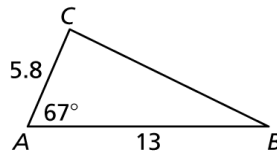
70 m

70°

100 m

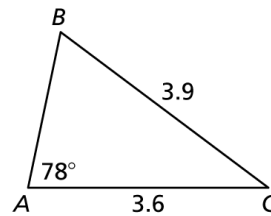**In Exercises 7–12, solve the triangle. Round decimal answers to the nearest tenth.**

7.

B

A 59°   13

88°

C

8.

C

5.8

67°

A   13   *B*

9.

B

3.9

78°

A   3.6   *C*

10.

C

7   6

A   10   *B*

11.

B

24°

12

85°

A   *C*

12.

A   15   *C*
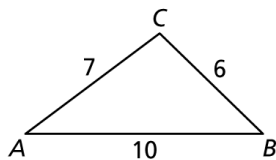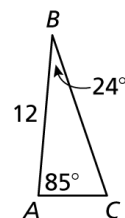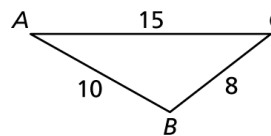
10   8

B

13. A bike frame has a top tube length of 20.75 inches, a seat tube length of 8.9 inches, and a seat tube angle of 71°.

   top tube

   20.75 in.

   seat tube

   71°

   8.9 in.

   down tube

   a. Find the approximate length of the down tube.

   b. Find the angle between the seat tube and down tube.