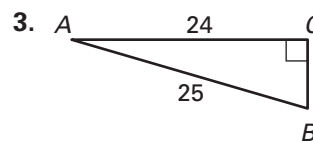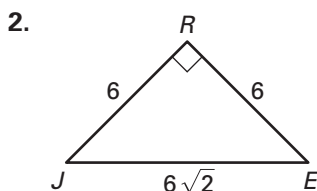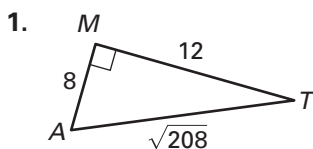**LESSON**

9.5

Practice C

For use with pages 558–566

Find the sine, the cosine, and the tangent of the acute angles of the triangle. Express each answer as a decimal rounded to four places.

1.

M

12

8

A

T

$\sqrt{208}$

2.

R

6   6

J $6\sqrt{2}$ E

3.

A   24   C

25   7

B

Use a calculator to approximate the given value to four decimal places.

4. sin 49°

5. cos 83°

6. tan 4°

7. sin 71°

8. tan 75°

9. cos 15°

10. sin 32°

11. cos 64°

Find the value of each variable. Round decimals to the nearest tenth.

12.

y   18

64°

x

13.

38°

14   y

x

14.

15

19°

y

x
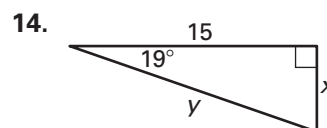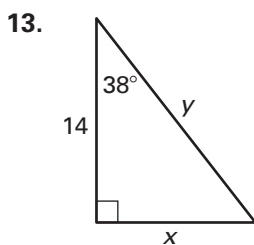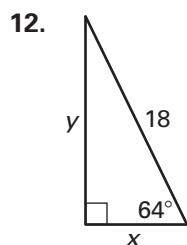
In Exercises 15–17, use the figure of the lighthouse.

15. At 2 P.M. the shadow of a lighthouse is 22 feet long and the angle of elevation is 72°. Find the height of the lighthouse.

16. At 4 P.M. the angle of elevation of the sun is 40°. Find the length of the shadow cast by the lighthouse.

17. At 6 P.M. will the length of the shadow be longer or shorter than it was at 4 P.M.? Explain.

72°

22 ft
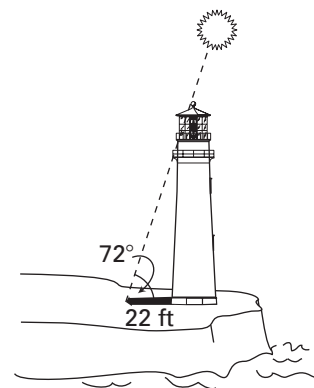
In Exercises 18 and 19, use the figure of the escalator.

18. A new store is being built. An escalator is planned. It will make an angle of 34° with the floor. If the vertical distance between floors is 14 feet, how long will the escalator be?

19. If the angle made with the floor is changed to 36°, will the length of the escalator increase or decrease? Explain.

14 ft

34°