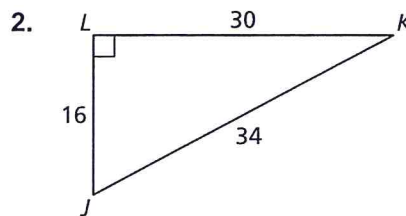
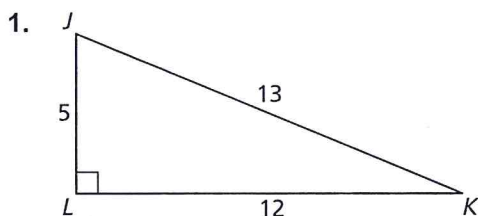


# 9.5

## Practice A

In Exercises 1 and 2, find  $\sin J$ ,  $\sin K$ ,  $\cos J$ , and  $\cos K$ . Write each answer as a fraction and as a decimal rounded to four places.



In Exercises 3–6, write the expression in terms of sine or cosine.

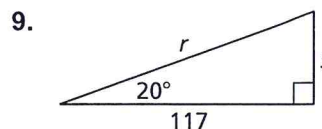
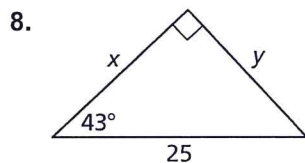
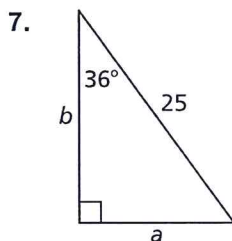
3.  $\sin 22^\circ$

4.  $\cos 56^\circ$

5.  $\cos 15^\circ$

6.  $\sin 37^\circ$

In Exercises 7–9, find the value of each variable using sine and cosine. Round your answers to the nearest tenth.



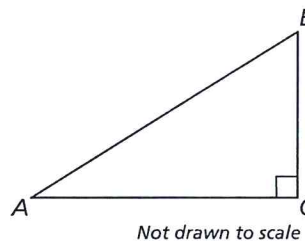
10. Which statement *cannot* be true? Explain.

A.  $\sin A = 0.5$

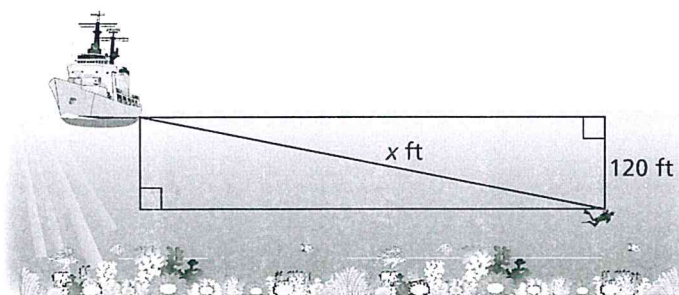
B.  $\sin A = 1.2654$

C.  $\sin A = 0.9962$

D.  $\sin A = \frac{3}{4}$



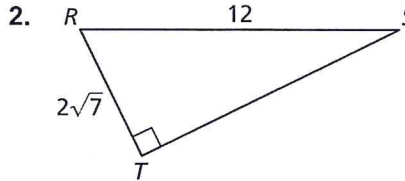
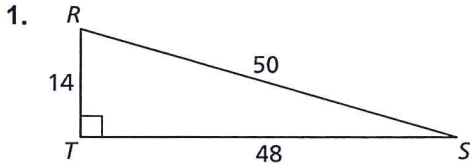
11. The angle of depression is  $11^\circ$  from the bottom of a boat to a deep sea diver at a depth of 120 feet. Find the distance  $x$  the diver must swim up to the boat to the nearest foot.



# 9.5

## Practice B

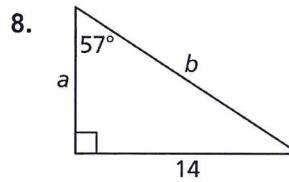
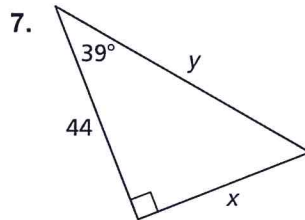
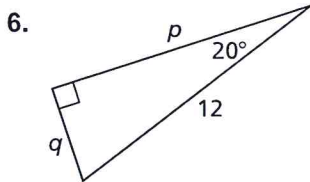
In Exercises 1 and 2, find  $\sin R$ ,  $\sin S$ ,  $\cos R$ , and  $\cos S$ . Write each answer as a fraction and as a decimal rounded to four places.



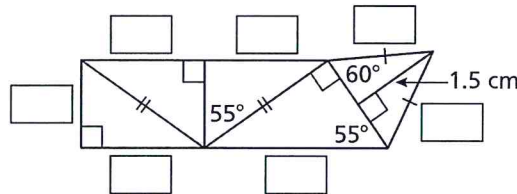
In Exercises 3–5, write the expression in terms of sine and/or cosine.

3.  $\sin 7^\circ$                       4.  $\cos 31^\circ$                       5.  $\tan 60^\circ$

In Exercises 6–8, find the value of each variable using sine and cosine. Round your answers to the nearest tenth.



9. Find the perimeter of the figure shown. Round your answer to the nearest centimeter.



10. You use an extension ladder to repair a chimney that is 33 feet tall. The length of the extension ladder ranges in one-foot increments from its minimum length to its maximum length. For safety reasons, you should always use an angle of about  $75.5^\circ$  between the ground and your ladder.

- Your smallest extension ladder has maximum length of 17 feet. How high does this ladder safely reach on the chimney? Round your answer to the nearest tenth of a foot.
- You place the ladder 3 feet from the base of the chimney. How many feet long should the ladder be? Round your answer to the nearest foot.
- To reach the top of the chimney, you need a ladder that reaches 30 feet high. How many feet long should the ladder be? Round your answer to the nearest foot.

