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° **4.** cos 31° **5.** tan 60°

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



- **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° between the ground and your ladder.
 - **a.** 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.
 - **b.** 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.
 - **c.** 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.

