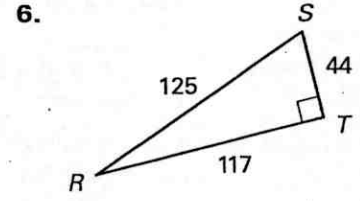
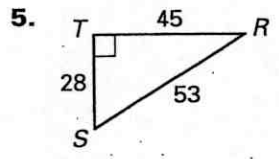
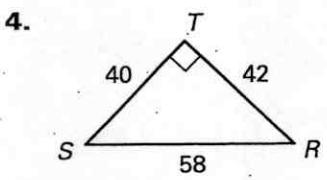
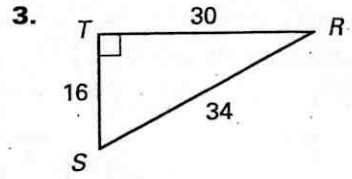
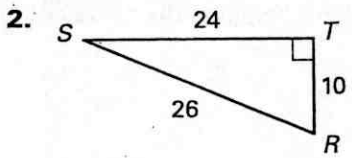
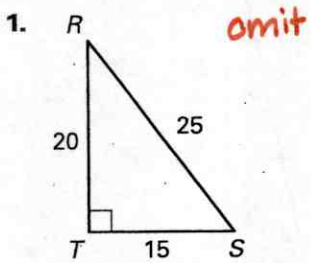


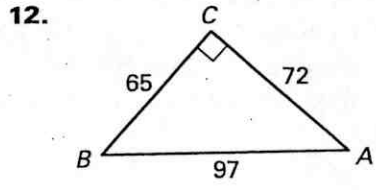
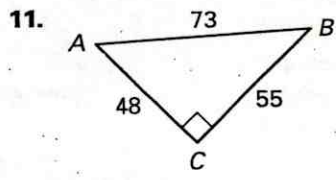
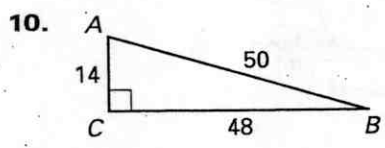
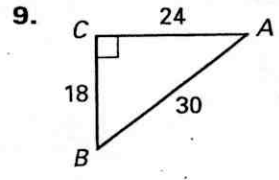
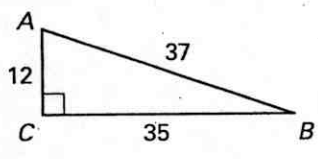
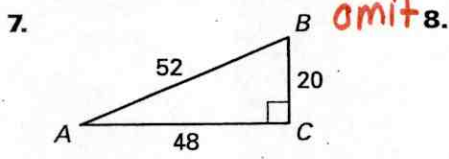
LESSON 7.6 Practice
For use with pages 473-480



Find $\sin R$ and $\sin S$. Write each answer as a fraction and as a decimal. Round to four decimal places, if necessary.



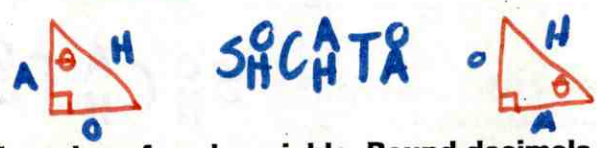
Find $\cos A$ and $\cos B$. Write each answer as a fraction and as a decimal. Round to four decimal places, if necessary.



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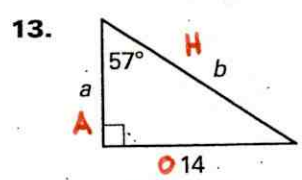


LESSON 7.6 Practice *continued*
For use with pages 473-480

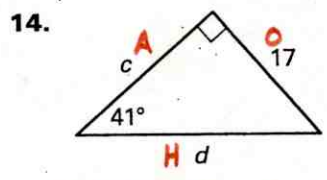


$\cos(\theta) = \frac{A}{H}$
 $\sin(\theta) = \frac{O}{H}$
 $\tan(\theta) = \frac{O}{A}$

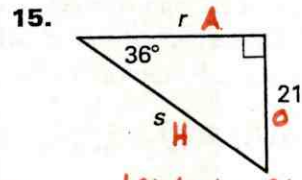
Use a **cosine or sine** ratio to find the value of each variable. Round decimals to the nearest tenth.



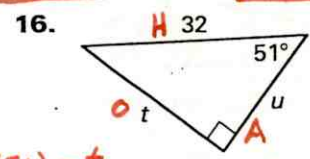
$\tan(57) = \frac{14}{a}$ $\sin(57) = \frac{14}{b}$
 $a = 9.1$ $b = 16.7$



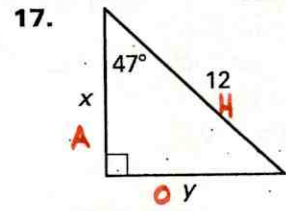
$\tan(41) = \frac{17}{c}$ $\sin(41) = \frac{17}{d}$
 $c = 19.6$ $d = 25.9$



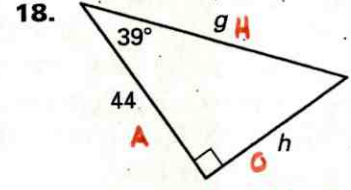
$\tan(36) = \frac{21}{s}$ $\sin(36) = \frac{21}{r}$
 $r = 28.9$ $s = 35.7$



$\sin(51) = \frac{t}{32}$ $\cos(51) = \frac{u}{32}$
 $t = 24.9$ $u = 20.1$



$\cos(47) = \frac{x}{12}$ $\sin(47) = \frac{y}{12}$
 $x = 8.2$ $y = 8.8$

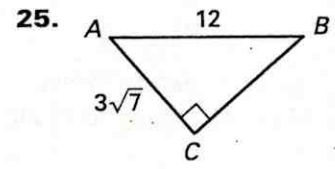
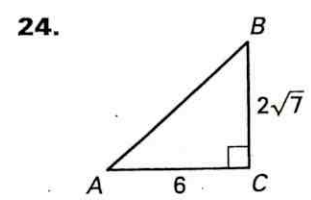
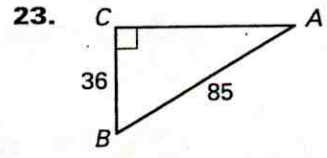
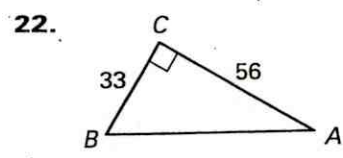


$\cos(39) = \frac{44}{g}$ $\tan(39) = \frac{h}{44}$
 $g = 56.6$ $h = 35.6$

Use the 45°-45°-90° Triangle Theorem or the 30°-60°-90° Triangle Theorem to find the sine and cosine of the angle.

19. a 30° angle *omit* 20. a 45° angle 21. a 60° angle

Find the unknown side length. Then find sin A and cos A. Write each answer as a fraction in simplest form and as a decimal. Round to four decimal places, if necessary.

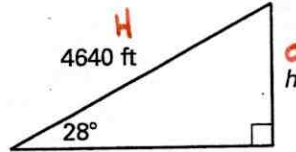


LESSON
7.6

Practice *continued*
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SINCHATA

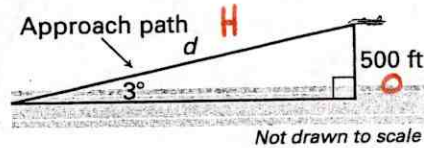
26. **Ski Lift** A chair lift on a ski slope has an angle of elevation of 28° and covers a total distance of 4640 feet. To the nearest foot, what is the vertical height h covered by the chair lift?



$$\sin(28) = \frac{h}{4640}$$

$$h = 2178 \text{ ft}$$

27. **Airplane Landing** You are preparing to land an airplane. You are on a straight line approach path that forms a 3° angle with the runway. What is the distance d along this approach path to your touchdown point when you are 500 feet above the ground? Round your answer to the nearest foot.



$$\sin(3) = \frac{500}{d}$$

$$d = 9554 \text{ ft}$$

28. **Extension Ladders** You are using extension ladders to paint a chimney that is 33 feet tall. The length of an extension ladder ranges in one-foot increments from its minimum length to its maximum length. For safety, you should always use an angle of about 75.5° between the ground and the ladder.



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