Name _____ Date _____

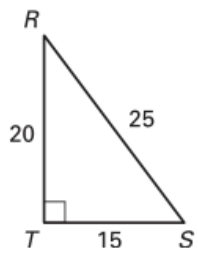
LESSON 7.6

Practice

For use with the lesson "Apply the Sine and Cosine Ratios"

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

1.



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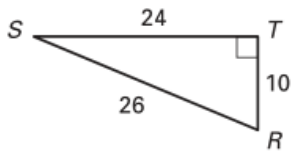

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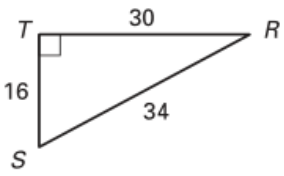
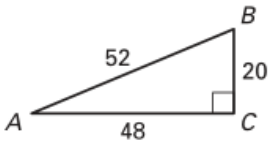


Find cos *A* and cos *B*. Write each answer as a fraction and as a decimal. Round to four decimal places, if necessary.

4.



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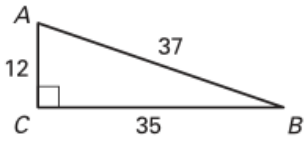

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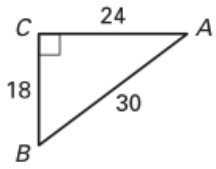
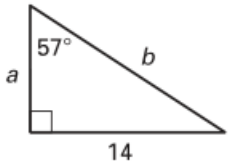


Use a cosine or sine ratio to find the value of each variable. Round decimals to the nearest tenth.

7.



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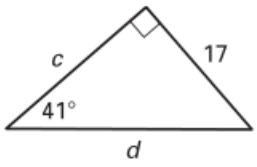

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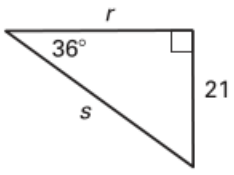
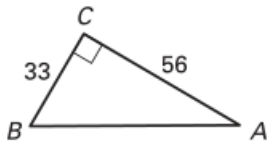


Find the unknown side length. Then find sin *A* and cos *A*. Write each answer as a fraction in simplest form and as a decimal. Round to four decimal places, if necessary.

10.



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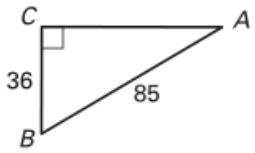
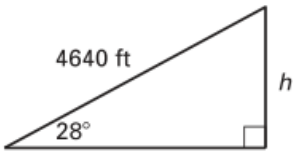
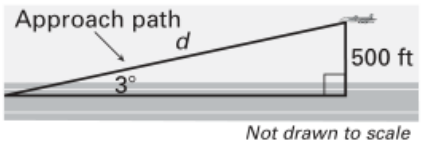


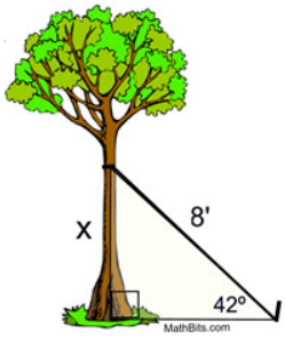
12. **Ski Lift** A chair lift on a ski slope has an angle of elevation of 28° and covers a total distance of 4640 feet. To the nearest foot, what is the vertical height *h* covered by the chair lift?



13. **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.



A nursery plants a new tree and attaches a guy wire to help support the tree while its roots take hold. An eight foot wire is attached to the tree and to a stake in the ground. From the stake in the ground the angle of elevation of the connection with the tree is 42°. Find to the *nearest tenth of a foot*, the height of the connection point on the tree.



Find the shadow cast by a 10 foot lamp post when the angle of elevation of the sun is 58°. Find the length to the *nearest tenth of a foot.*