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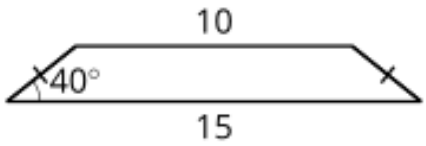
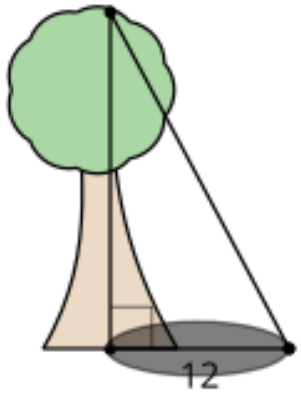
Curated Practice Problem Set

Unit 4 Lesson 10 Cumulative Practice Problems

1. *Technology required.* Find the area of the isosceles trapezoid.



2. *Technology required.* The sun is 62 degrees above the horizon. A tree casts a shadow that is 12 feet long. How tall is the tree?



3. *Technology required.* A plane leaves the ground with an elevation angle of 6 degrees. The plane travels 10 miles horizontally.

    a. How high is the plane at the time?

    b. What is the distance of the plane's path?

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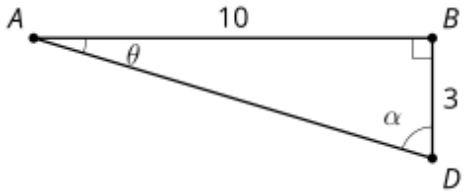
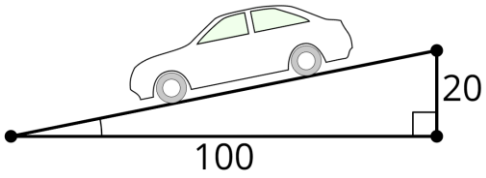
4. *Technology required.* Find the missing measurements.



(From Unit 4, Lesson 9.)

5. *Technology required.* Ramps in a parking garage need to be steep. The maximum safe incline for a ramp is 8.5 degrees.

   Is this a safe ramp? Explain or show your reasoning.



(From Unit 4, Lesson 9.)

6. Select **all** true equations.

   A. $\cos(37) = \sin(53)$

   B. $\tan(37) = \tan(53)$

   C. $\sin(37) = \cos(53)$

   D. $\sin(37) = \sin(53)$

   E. $\cos(\theta) = \sin(90 - \theta)$

   (From Unit 4, Lesson 8.)

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7. *Technology required.* Clare is flying a kite. She gets tired, so she stakes the kite into the ground. The kite is on a string that is 30 ft long and makes a 27 degree angle with the ground. How high is the kite?

   A. 30 ft

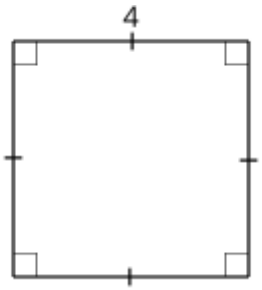
   B. 13.6 ft

   C. 26.7 ft

   D. 15.3 ft

   (From Unit 4, Lesson 7.)

8. What is the length of the diagonal?



   (From Unit 4, Lesson 2.)