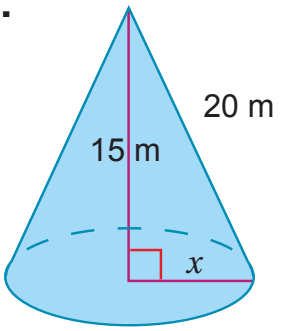
Name: _____

Pythagorean Theorem in 3D

Additional Exercises

Solve for x. Round to the nearest tenth, if necessary.

1.



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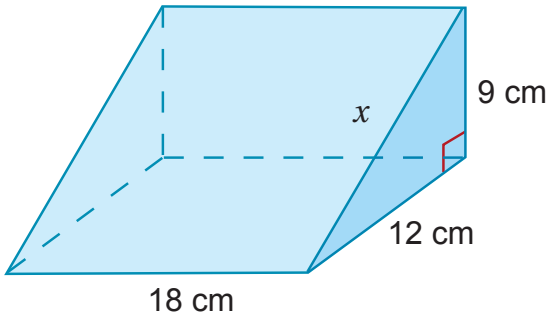

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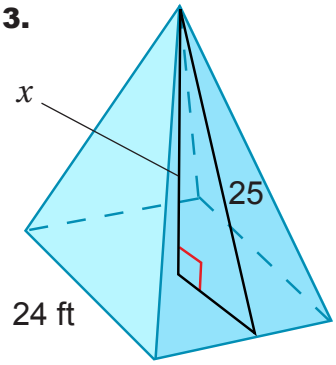

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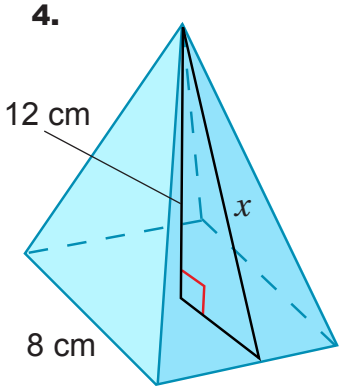

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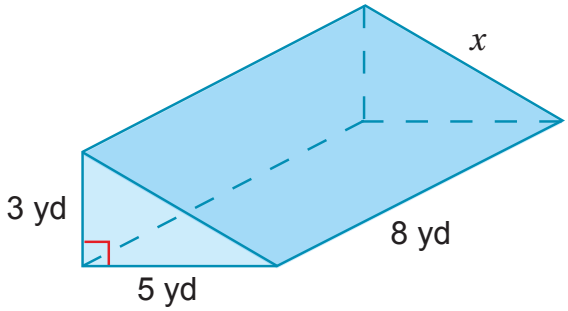

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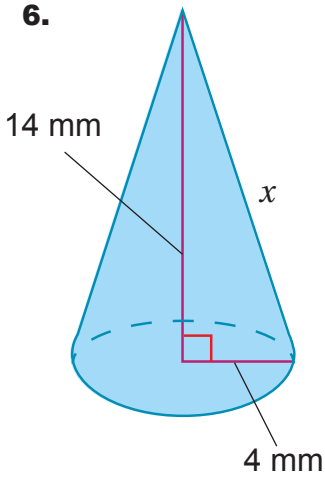

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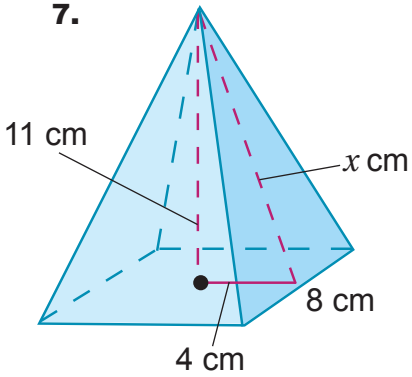

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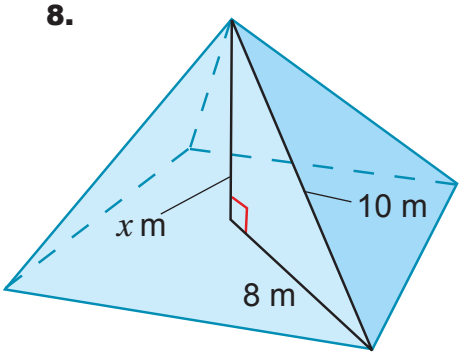

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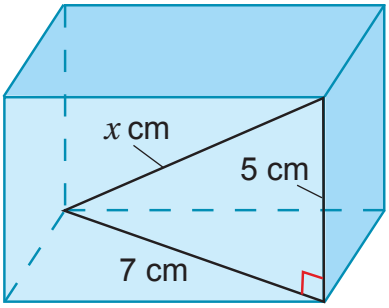


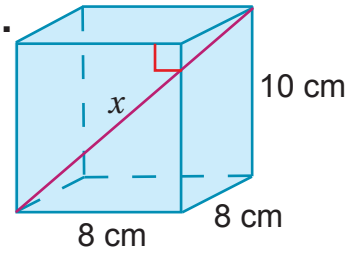
Name: _____

Pythagorean Theorem in 3D

Extension

Solve for x. Round to the nearest tenth, if necessary.

1.



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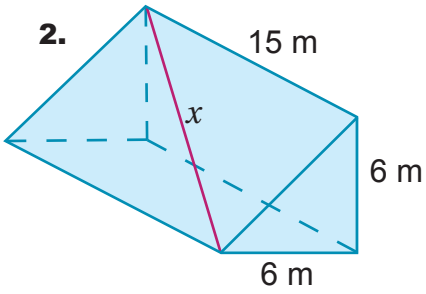

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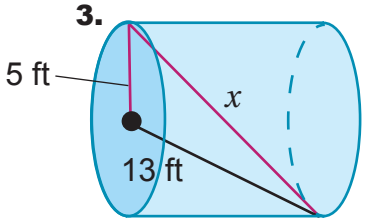

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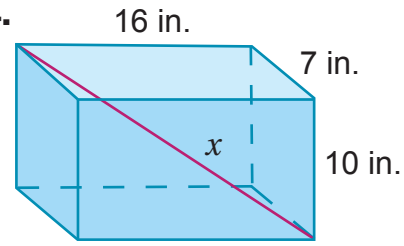

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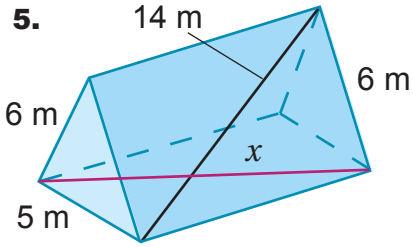

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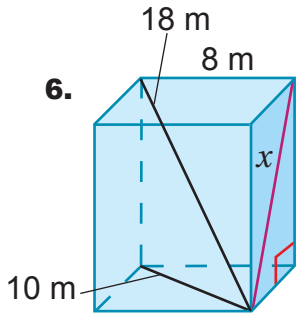

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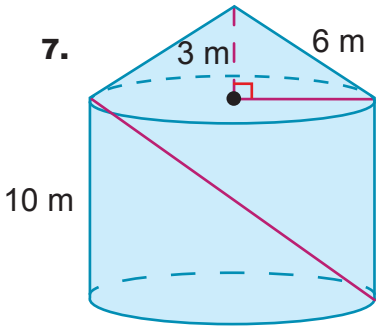

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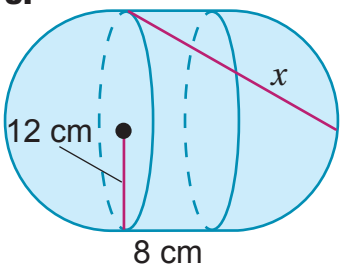

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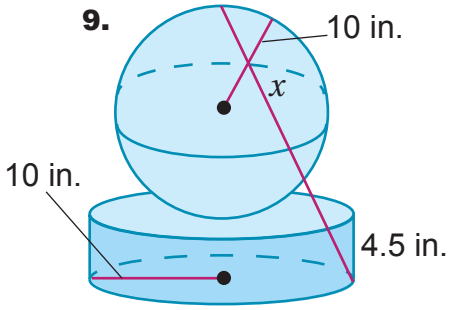

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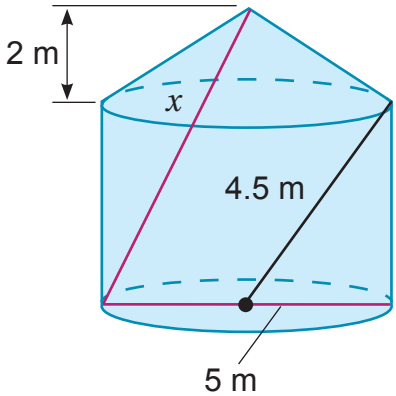

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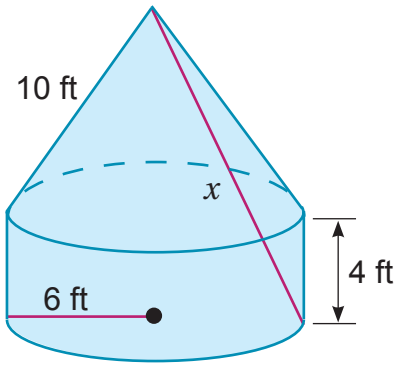

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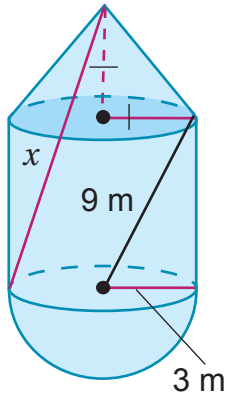
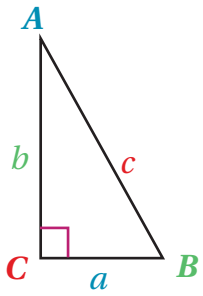


Name: _____

Pythagorean Theorem in 3D

Enrichment

If you know one side length and one of the acute angles of a right triangle, you can use trigonometric ratios to find the other side lengths.

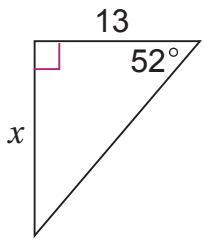


$$\sin A = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{a}{c} \qquad \cos A = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{b}{c} \qquad \tan A = \frac{\text{opposite}}{\text{adjacent}} = \frac{a}{b}$$

$$\sin B = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{b}{c} \qquad \cos B = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{a}{c} \qquad \tan B = \frac{\text{opposite}}{\text{adjacent}} = \frac{b}{a}$$

Use a calculator and the trigonometric ratios to find x. Round to the nearest hundredth.

1.



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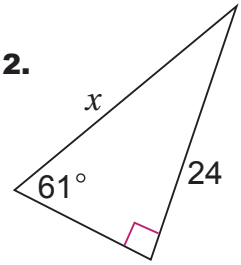

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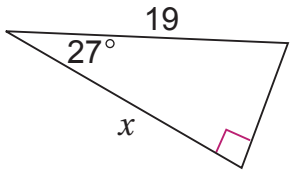

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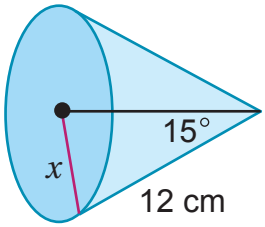

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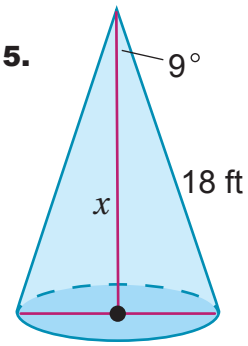

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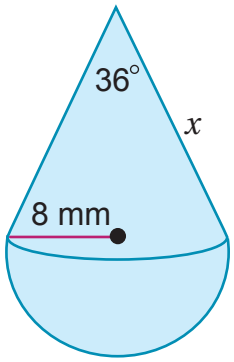

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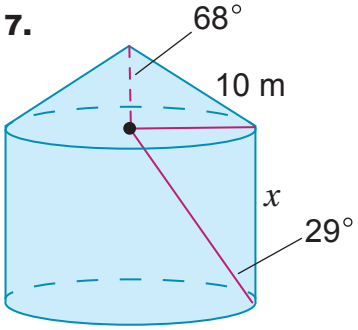

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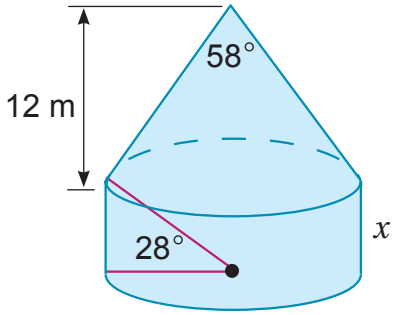

9.