## Unit 7 Lesson 15 Cumulative Practice Problems

1. Here is the base of a prism.
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	1. If the height of the prism is 5 cm, what is its surface area? What is its volume?
	2. If the height of the prism is 10 cm, what is its surface area? What is its volume?
	3. When the height doubled, what was the percent increase for the surface area? For the volume?
1. Select **all** the situations where knowing the volume of an object would be more useful than knowing its surface area.
	1. Determining the amount of paint needed to paint a barn.
	2. Determining the monetary value of a piece of gold jewelry.
	3. Filling an aquarium with buckets of water.
	4. Deciding how much wrapping paper a gift will need.
	5. Packing a box with watermelons for shipping.
	6. Charging a company for ad space on your race car.
	7. Measuring the amount of gasoline left in the tank of a tractor.
2. Han draws a triangle with a $50^{∘}$ angle, a $40^{∘}$ angle, and a side of length 4 cm as shown. Can you draw a different triangle with the same conditions?
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* (From Unit 7, Lesson 9.)
1. Angle $H$ is half as large as angle $J$. Angle $J$ is one fourth as large as angle $K$. Angle $K$ has measure 240 degrees. What is the measure of angle $H$?
* (From Unit 7, Lesson 3.)
1. The Colorado state flag consists of three horizontal stripes of equal height. The side lengths of the flag are in the ratio $2:3$.  The diameter of the gold-colored disk is equal to the height of the center stripe. What percentage of the flag is gold?
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* (From Unit 4, Lesson 9.)



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