### Lesson 7 Practice Problems

1. A solid with volume 8 cubic units is dilated by a scale factor of to obtain a solid with volume cubic units. Find the value of which results in an image with each given volume.
   1. 216 cubic units
   2. 1 cubic unit
   3. 1,000 cubic units
2. A solid has volume 7 cubic units. The equation represents the scale factor of by which the solid must be dilated to obtain an image with volume cubic units. Select **all** points which are on the graph representing this equation.
3. A solid with surface area 8 square units is dilated by a scale factor of to obtain a solid with surface area square units. Find the value of which leads to an image with each given surface area.
   1. 512 square units
   2. square unit
   3. 8 square units
4. It takes of a roll of wrapping paper to completely cover all 6 sides of a small box that is shaped like a rectangular prism. The box has a volume of 10 cubic inches. Suppose the dimensions of the box are tripled.
   1. How many rolls of wrapping paper will it take to cover all 6 sides of the new box?
   2. What is the volume of the new box?

* (From Unit 5, Lesson 6.)

1. A solid with volume 8 cubic units is dilated by a scale factor of . Find the volume of the image for each given value of .

* (From Unit 5, Lesson 6.)

1. A figure has an area of 9 square units. The equation represents the scale factor of by which the solid must be dilated to obtain an image with area of square units. Select **all** points which are on the graph representing this equation.

* (From Unit 5, Lesson 5.)

1. Noah edits the school newspaper. He is planning to print a photograph of a flyer for the upcoming school play. The original flyer has an area of 576 square inches. The picture Noah prints will be a dilation of the flyer using a scale factor of . What will be the area of the picture of the flyer in the newspaper?

* (From Unit 5, Lesson 4.)

1. Angle is 90 degrees and angle is 45 degrees. Side is 3 feet. How long is side ?

* (From Unit 4, Lesson 6.)



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