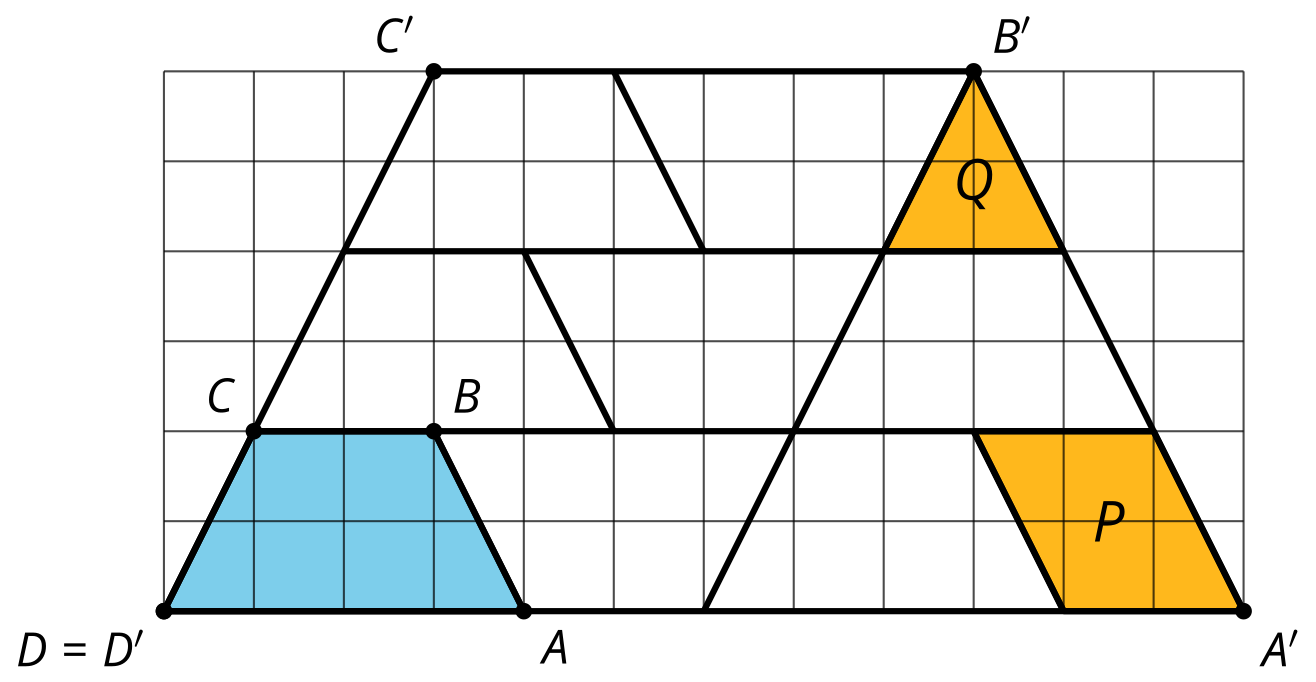
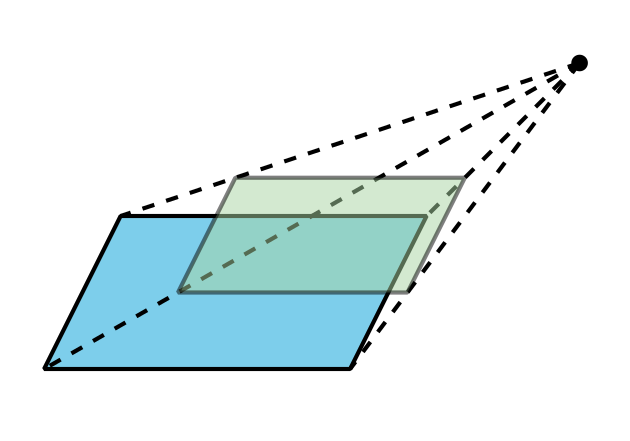
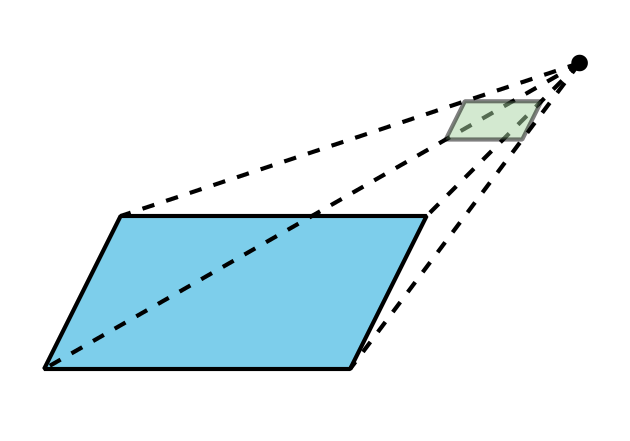
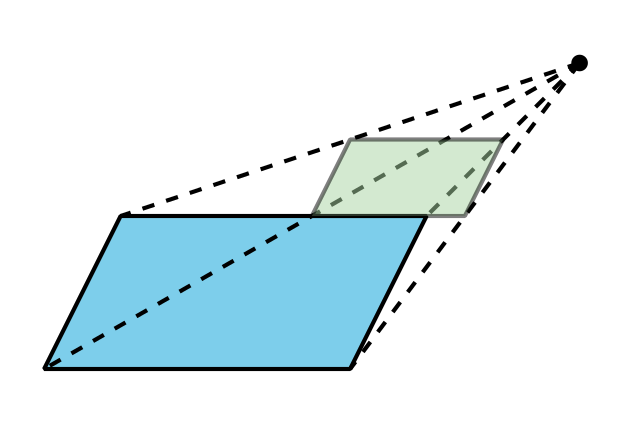
### Lesson 4 Practice Problems

1. A rectangle with area 12 square units is dilated by a scale factor of . Find the area of the image for each given value of .
2. The area of a circle of radius 1 is units squared. Use scaling to explain why the area of a circle of radius is units squared.
3. Trapezoid was created by dilating trapezoid using as the center of dilation.

* 
  1. What was the scale factor of the dilation?
  2. Based on the scale factor, how many copies of , including the original, should fit inside ?
  3. How can you see your answer to these questions in the diagram?

1. Each image shows a quadrilateral in a plane. The quadrilateral has been dilated using a center above the plane and a scale factor between 0 and 1. Estimate the scale factor that was used for each dilation.

* Dilation A
* 
* Dilation B
* 
* Dilation C
* 
* (From Unit 5, Lesson 3.)

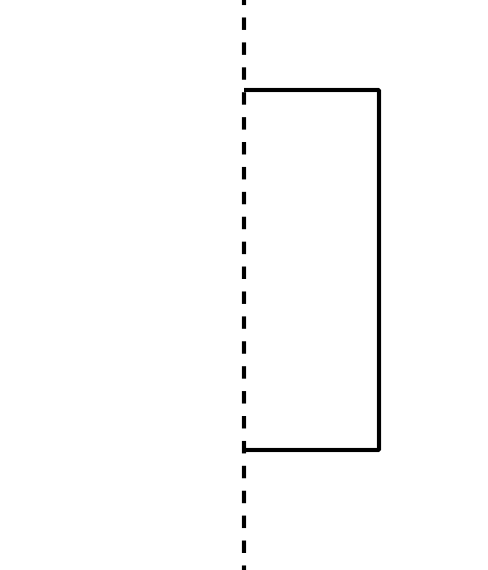
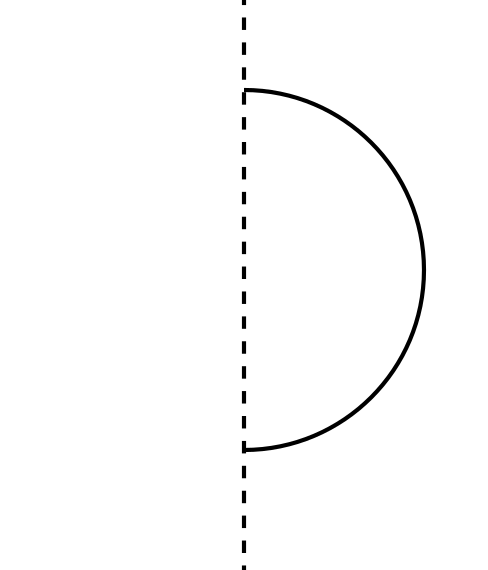
1. Select the solid whose cross sections are dilations of some two-dimensional shape using a point directly above the shape as a center and scale factors ranging from 0 to 1.
   1. cone
   2. cube
   3. cylinder
   4. triangular prism

* (From Unit 5, Lesson 3.)

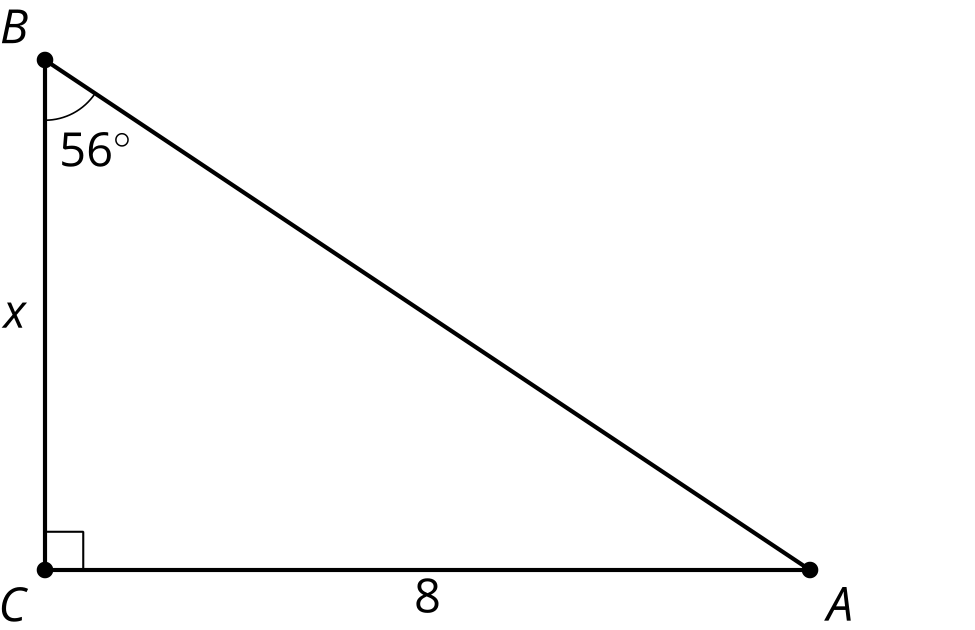
1. Select **all** figures for which at least one cross section is a circle.
   1. triangular pyramid
   2. square pyramid
   3. rectangular prism
   4. cube
   5. cone
   6. cylinder
   7. sphere

* (From Unit 5, Lesson 2.)

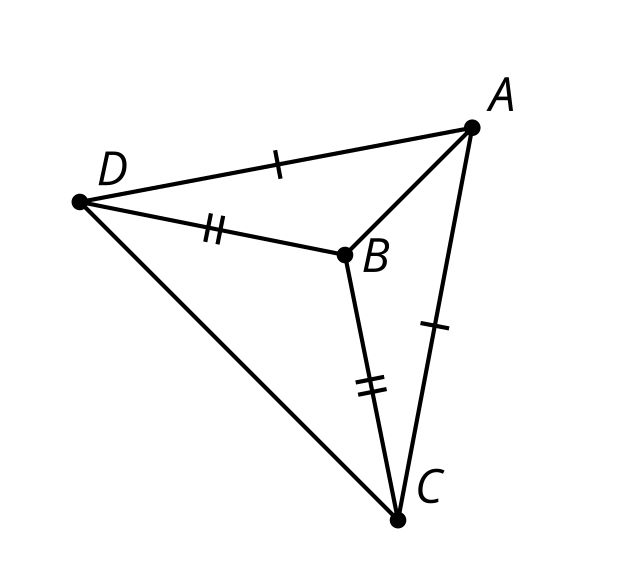
1. If the two-dimensional figures are rotated around the vertical axes of rotation shown, what solids are formed?

* 
* 
* (From Unit 5, Lesson 1.)

1. Tyler and Jada wish to find the value of , the length of side in this triangle. Tyler decides to set up the equation . Jada says she prefers an equation that has in the numerator. What is an equation she could use instead?

* 
* ​​​​
* (From Unit 4, Lesson 8.)

1. Triangles and are isosceles. Angle has a measure of 110 degrees and angle has a measure of 22 degrees. Find the measure of angle .

* and
* 
* (From Unit 2, Lesson 6.)



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