### Lesson 2 Practice Problems

1. Select **all** figures for which there exists a direction such that all cross sections taken at that direction are congruent.
	1. triangular pyramid
	2. square pyramid
	3. rectangular prism
	4. cube
	5. cone
	6. cylinder
	7. sphere
2. Imagine an upright cone with its base resting on your horizontal desk. Sketch the cross section formed by intersecting each plane with the cone.
	1. vertical plane not passing through the cone’s topmost point
	2. horizontal plane
	3. diagonal plane
3. Name 2figures for which a circle can be a cross section.
4. Sketch the solid of rotation formed by rotating the given two-dimensional figure using the dashed vertical line as an axis of rotation.
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* (From Unit 5, Lesson 1.)
1. Draw a two-dimensional figure that could be rotated using a vertical axis of rotation to give the cone shown.
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* (From Unit 5, Lesson 1.)
1. A regular hexagon and a regular octagon are both inscribed in the same circle. Which of these statements is true?
	1. The perimeter of the hexagon is less than the perimeter of the octagon, and each perimeter is less than the circumference of the circle.
	2. The perimeter of the octagon is less than the perimeter of the hexagon, and each perimeter is less than the circumference of the circle.
	3. The perimeter of the hexagon is greater than the perimeter of the octagon, and each perimeter is greater than the circumference of the circle.
	4. The perimeter of the octagon is greater than the perimeter of the hexagon, and each perimeter is greater than the circumference of the circle.
* (From Unit 4, Lesson 11.)
1. *Technology required.*Find the perimeter of the figure.
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* (From Unit 4, Lesson 10.)
1. Match each trigonometric function to a ratio. You may use ratios more than once.
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	1. $tan\left(A\right)$
	2. $tan\left(B\right)$
	3. $cos\left(A\right)$
	4. $cos\left(B\right)$
	5. $sin\left(A\right)$
	6. $sin\left(B\right)$
	7. $\frac{y}{z}$
	8. $\frac{x}{z}$
	9. $\frac{x}{y}$
	10. $\frac{y}{x}$
* (From Unit 4, Lesson 6.)
1. Explain how you know lines $m$ and $l$ are parallel.
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* (From Unit 1, Lesson 20.)



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