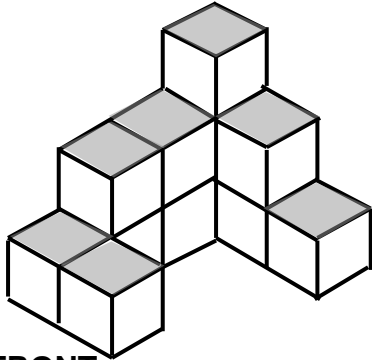


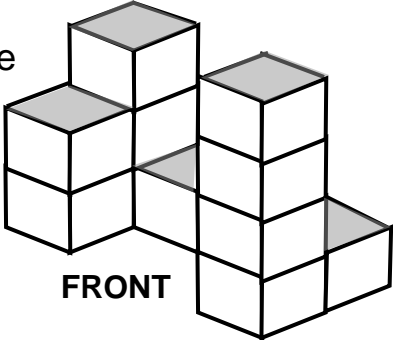
NAME \_\_\_\_\_ DATE \_\_\_\_\_ PER. \_\_\_\_\_

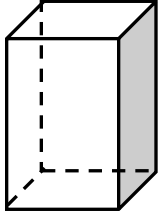
**REVIEW #16: SURFACE AREA & VOLUME OF PRISMS & CYLINDERS**

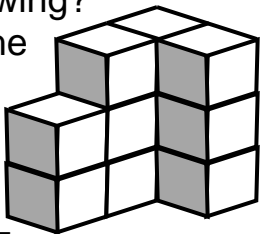
**PART 1: View of 3-Dimensional Objects, Nets & Cross Sections**

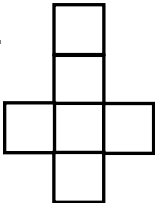
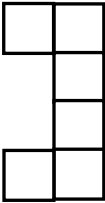
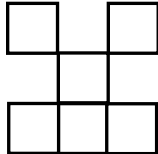
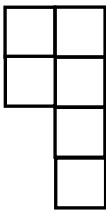
Refer to the isometric drawing below to draw the indicated orthogonal views.

 <p style="text-align: left; margin-top: 10px;"><b>FRONT</b></p>	1. Front:	2. Right:	3. Top:
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4. _____	<p>How many squares would be shown in the right-side orthogonal view of the following figure?</p>	 <p style="text-align: left; margin-top: 10px;"><b>FRONT</b></p>
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5. _____	<p>How many lateral edges does this prism have?</p>	
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6. _____ _____	<p>How many cubes make up this isometric drawing? If the edge of one cube is 4 inches, what is the volume of the figure?</p>	 <p style="text-align: left; margin-top: 10px;"><b>FRONT</b></p>
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7. _____	Which of the following is the net for a cube?			
	A. 	B. 	C. 	D. 

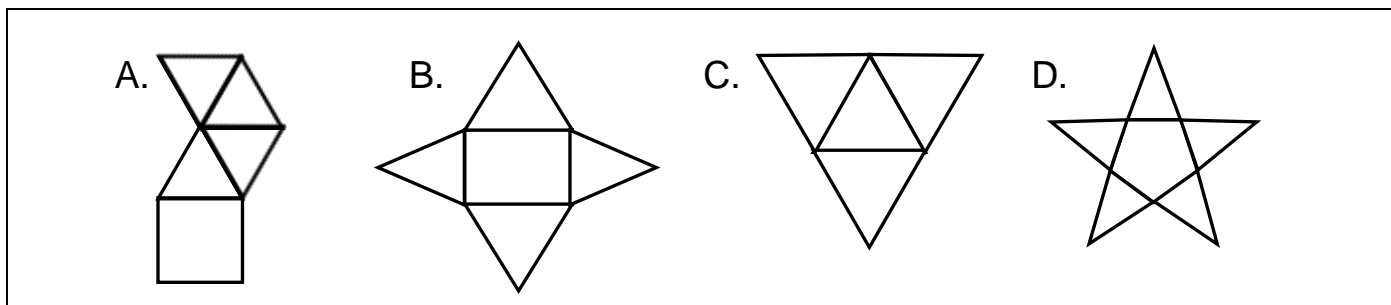
Match each solid with its corresponding net.

\_\_\_\_\_ 8. Rectangular pyramid

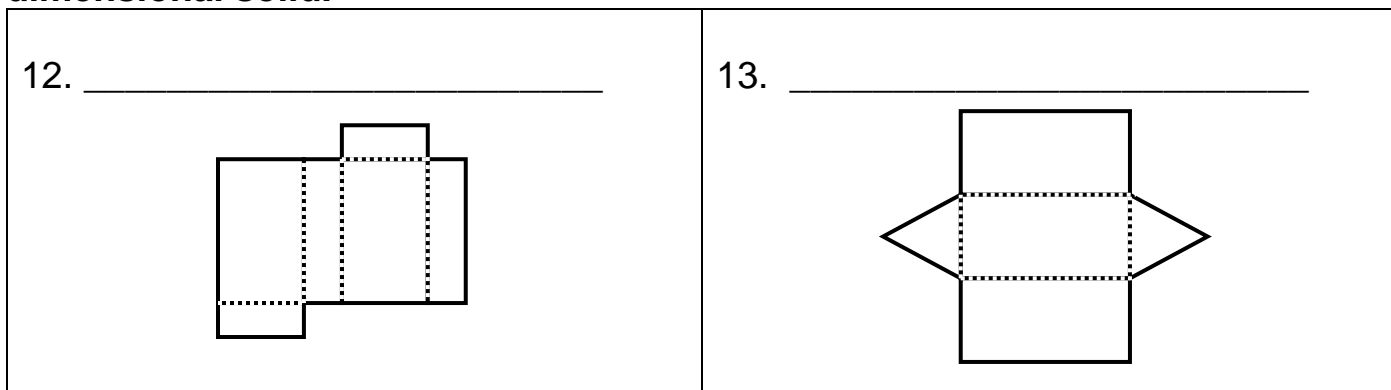
\_\_\_\_\_ 9. Triangular pyramid

\_\_\_\_\_ 10. Pentagonal pyramid

\_\_\_\_\_ 11. Square pyramid



Name the prism formed if each of the following nets were folded to form a three-dimensional solid.



Determine whether each statement is TRUE or FALSE. If FALSE, tell why.

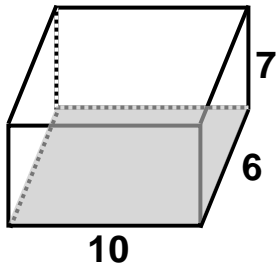
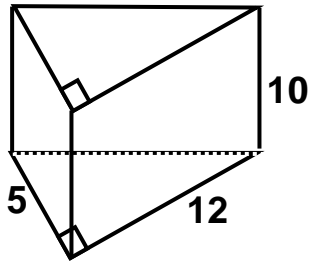
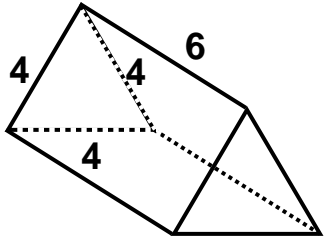
<p>14. TRUE or FALSE</p> <p>Why?</p>	<p>The lateral edge of a pyramid is also its height.</p>
<p>15. TRUE or FALSE</p> <p>Why?</p>	<p>The lateral faces of a regular pyramid are congruent isosceles triangles.</p>
<p>16. TRUE or FALSE</p> <p>Why?</p>	<p>A pyramid that has exactly five faces and five vertices is a square pyramid.</p>

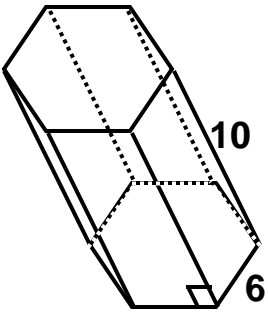
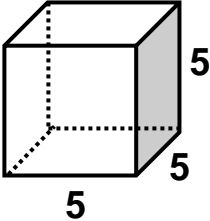
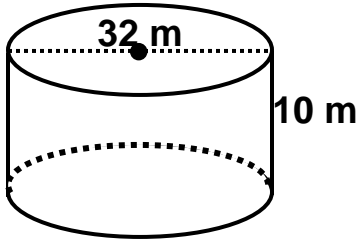
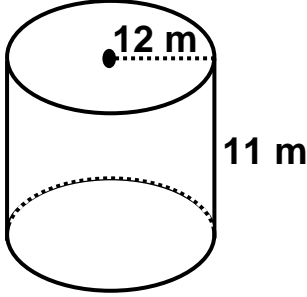
Name the cross section formed when the plane that intersects the following 3-dimensional objects is parallel to the base and when the plane is perpendicular to the base.

<p>17. A trapezoidal prism</p> <p>Parallel: _____</p> <p>Perpendicular: _____</p>	<p>18. A hexagonal pyramid with the perpendicular plane going through the vertex.</p> <p>Parallel: _____</p> <p>Perpendicular: _____</p>
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### PART 2: Surface Area & Volume of Prisms & Cylinders

For each of the following prisms or pyramids, find the a) Lateral Area, b) Total Area, and c) Volume.

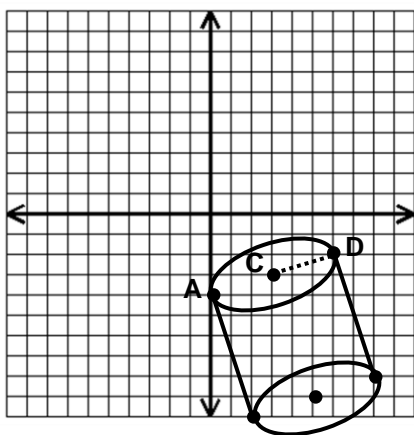
<p>19. a) _____</p> <p>b) _____</p> <p>c) _____</p>	 <p><i>*The shaded face is the base.</i></p>
<p>20. a) _____</p> <p>b) _____</p> <p>c) _____</p>	
<p>21. a) _____</p> <p>b) _____</p> <p>c) _____</p>	

<p>22. a) _____</p> <p>b) _____</p> <p>c) _____</p>	
<p>23. a) _____</p> <p>b) _____</p> <p>c) _____</p>	
<p>24. a) _____</p> <p>b) _____</p> <p>c) _____</p>	
<p>25. a) _____</p> <p>b) _____</p> <p>c) _____</p>	
<p>26. <math>h =</math> _____</p>	<p>A right circular cylinder has a Lateral Area of <math>48\pi \text{ mm}^2</math> and a radius of 4 mm. Find the height of the cylinder.</p>

27. $V =$ _____	Find the volume of a right circular cylinder with a radius of 6 cm and an altitude of 10 cm.
28. $d =$ _____	The Lateral Area of a cylinder is $100\pi \text{ cm}^2$ . Its height has a length of 10 cm. Find the diameter of the circle.
29. $V =$ _____	Find the volume of a cylinder with surface area of $224\pi \text{ m}^2$ and a radius of 8m.

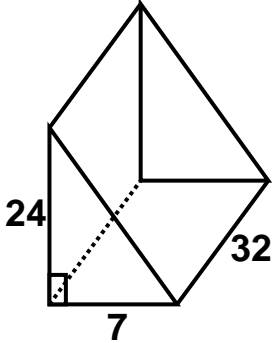
**PART 3: Surface Area, Volume, and the Coordinate Plane**

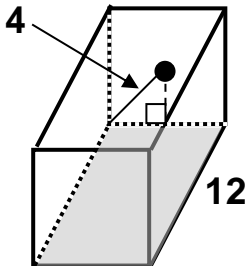
Refer to the cylinder graphed on the coordinate plane below to answer the questions that follow.



30. $LA =$ _____	What is the EXACT Lateral Area?
31. $TA =$ _____	What is the EXACT Total Area?
32. $V =$ _____	What is the Volume rounded to the nearest thousandth?
33. _____	What is the equation of the line containing the height joining the centers of the bases?

**Find the indicated measure.**

34. _____	Find the Total Area of a cube with an edge length of 8 cm.
35. _____	Find the Volume of a cube with edge length of $3\sqrt{2}$ cm.
36. _____	Find the Total Area of a triangular prism whose base is an isosceles right triangle with legs of 5 cm, and the height of the prism is 12 cm.
37. _____	Find the Volume of a rectangular prism with a length of 11 m, width of 7 m, and height of 6 m.
38. _____	Find the Lateral Area of a cube that has a base edge of 7.
39. _____	A rectangular prism has a volume of 884 cubic units. The dimensions of the base are 13 units by 4 units. Find its height.
40. _____	Find the Lateral Area: 

41. _____	Find the Volume: 
42. _____	A polyhedron has 7 vertices and 10 faces. How many edges does it have?
43. _____	Find the length of the diagonal of a right rectangular prism with a length of 8 cm, a width of 6 cm, and a height of 4 cm. Round to the nearest tenth.
44. _____	Find the distance between the following points. Round to the nearest tenth. $(-3, 1, 4)$ and $(2, 5, -1)$
45. _____	Find the midpoint of the segment connecting the points in #44.

**\*\*Go over all review problems from your assignments\*\***