

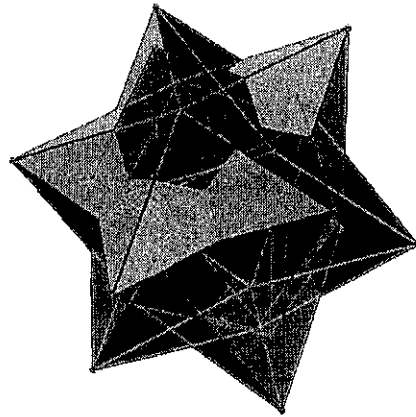
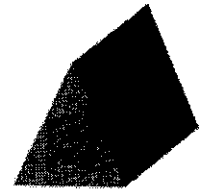
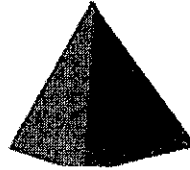
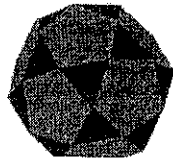
Name \_\_\_\_\_

Date \_\_\_\_\_

Geometry

## Polyhedra & Prisms

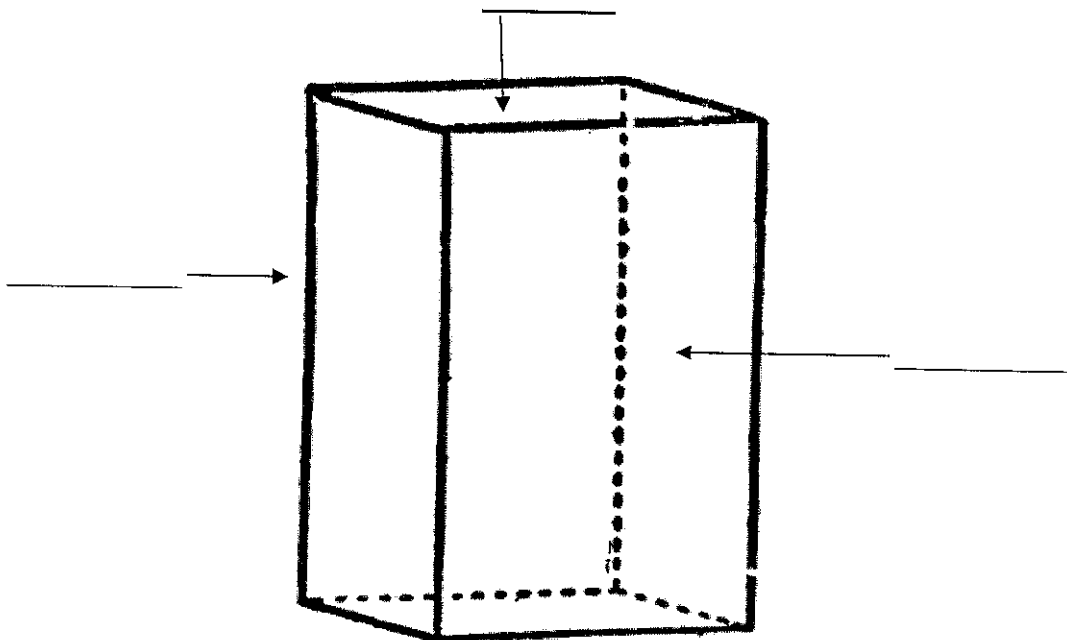
### Polyhedron-



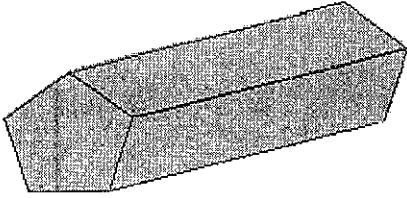
### Prism-

lateral sides-

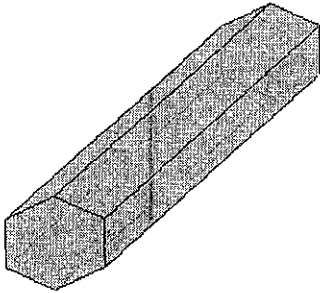
lateral edges-



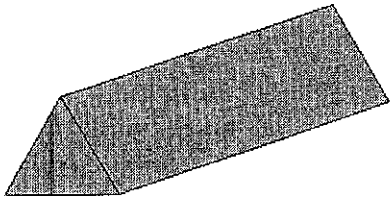
# Naming Prisms



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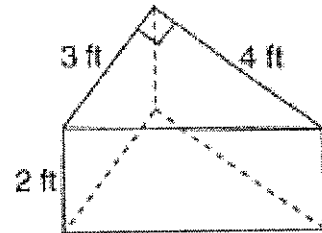
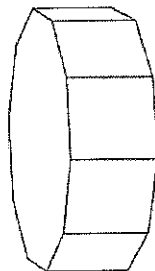
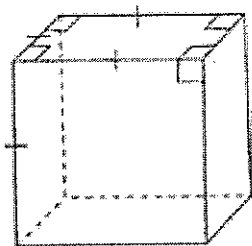
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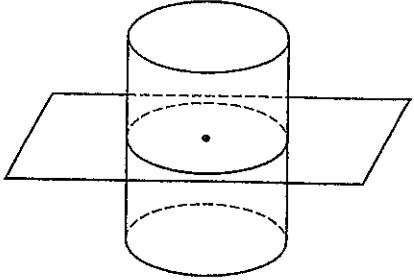
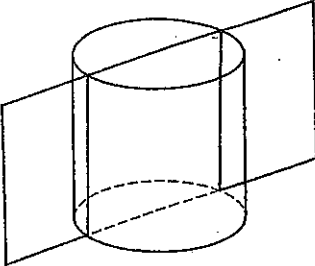
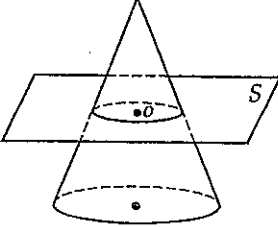
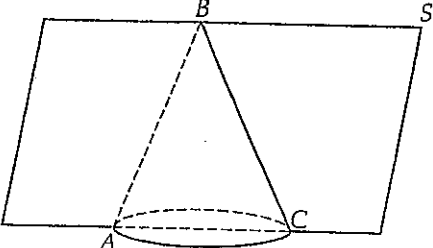
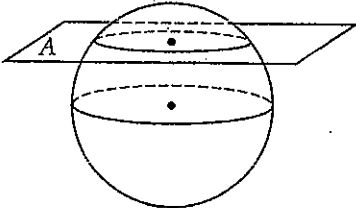
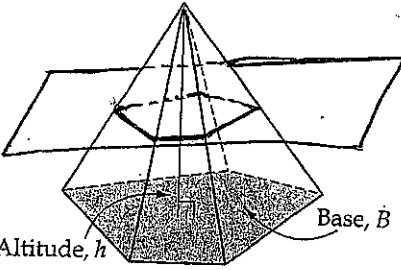
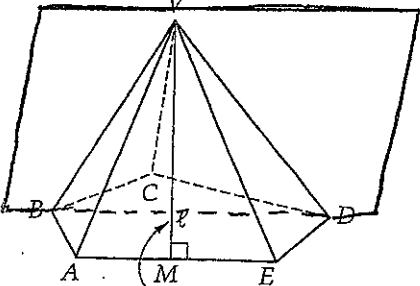
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## Right Prism-

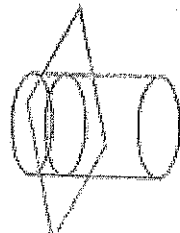
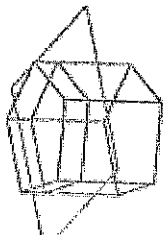
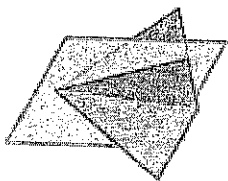
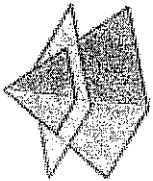
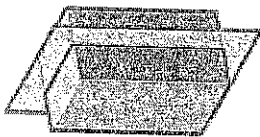
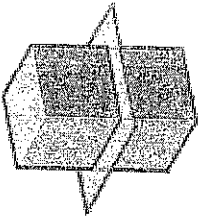
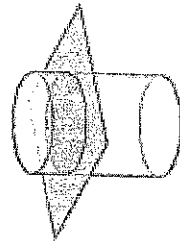
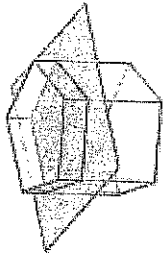
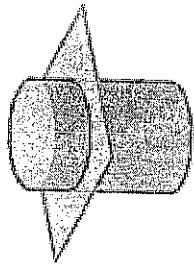
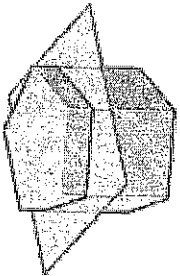
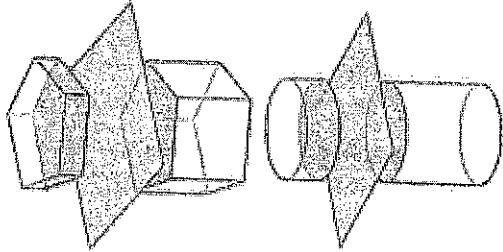
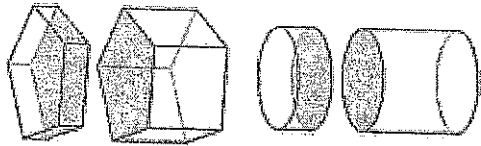
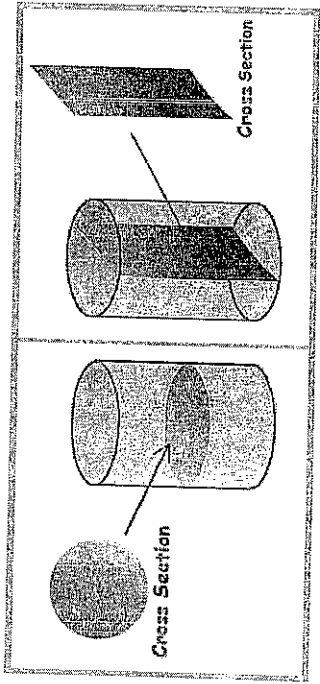
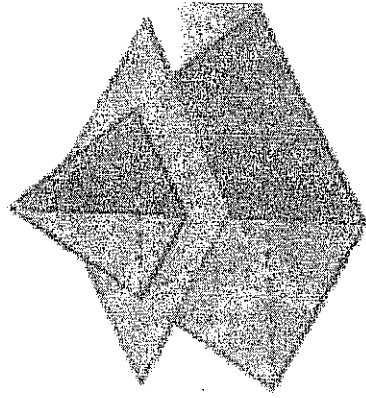
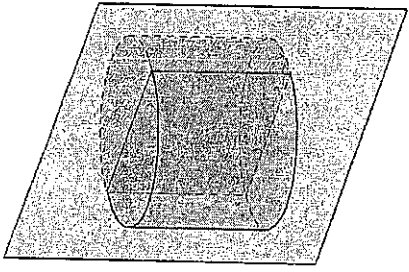
Example: For each right prism below state the shape of the base and the lateral side (face).

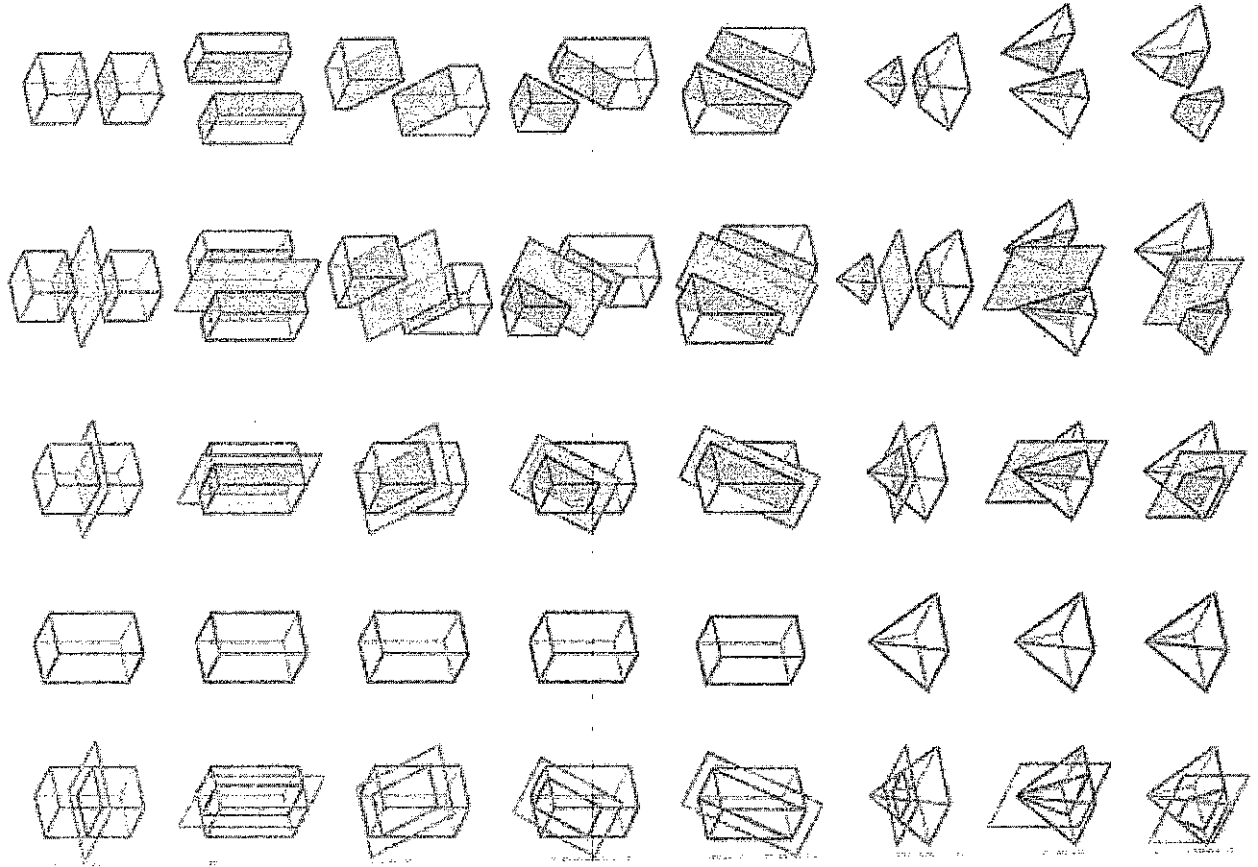
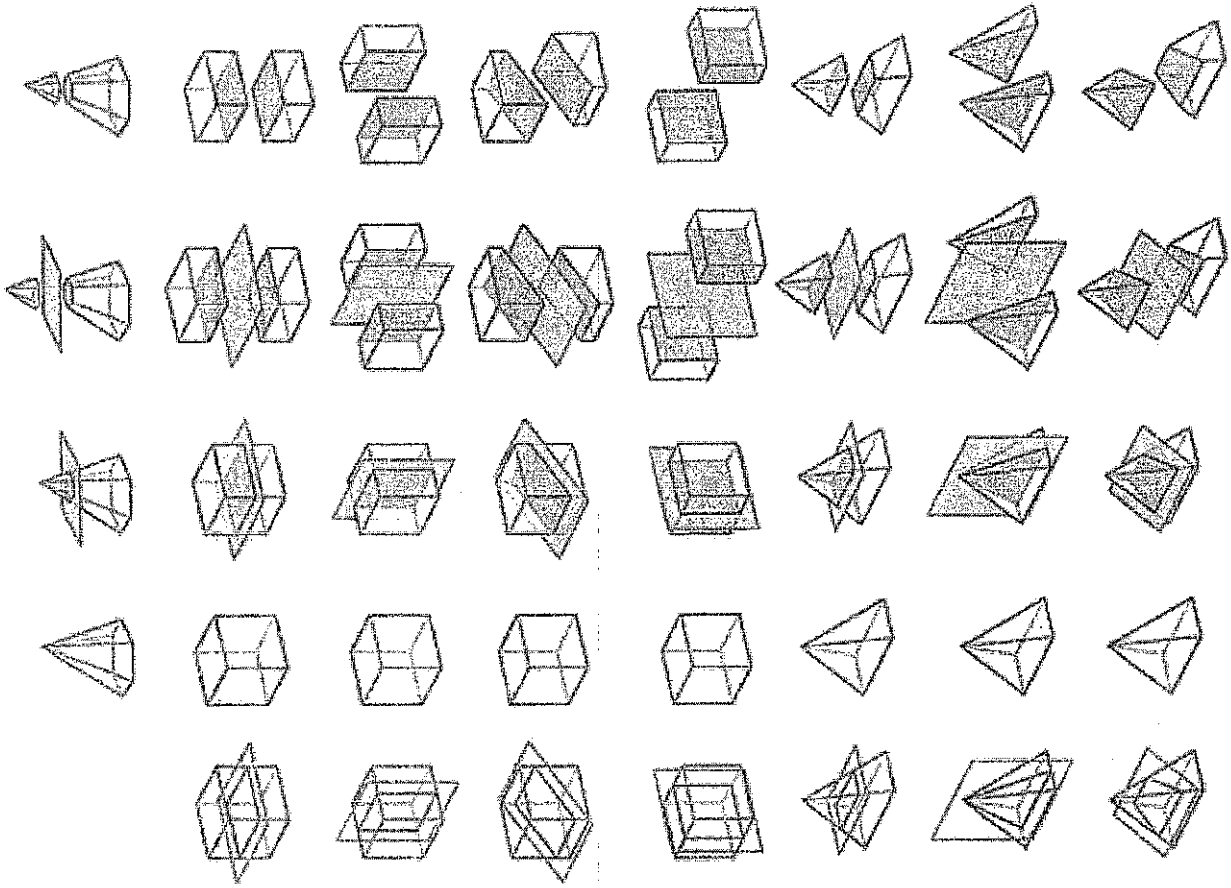


# Intersections with a Plane

Name of Solid	When a plane passes through the solid and is <b>parallel to the base</b> , the following polygon is formed:	When a plane passes through the solid and is <b>perpendicular to the base</b> , the following polygon is formed:
<b>Cylinder</b>	 <p style="text-align: center;"><b>circle</b></p>	 <p style="text-align: center;"><b>rectangle</b></p>
<b>Cone</b>	 <p style="text-align: center;"><b>circle</b></p>	 <p style="text-align: center;"><b>triangle</b></p>
<b>Sphere</b>	 <p style="text-align: center;"><b>circle</b></p>	<p>-----</p>
<b>Pyramid</b>	 <p style="text-align: center;"><b>same polygon as base</b></p>	 <p style="text-align: center;"><b>triangle</b></p>



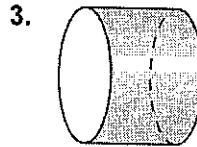
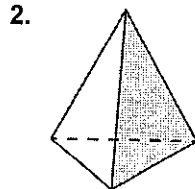
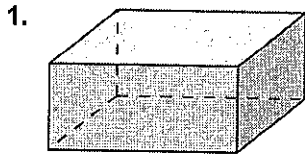




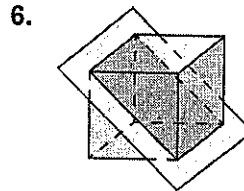
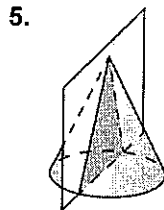
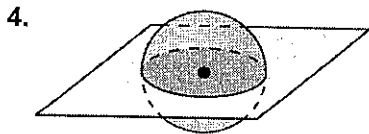
# 11.4

## Practice A

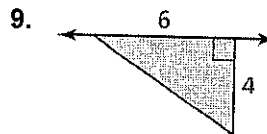
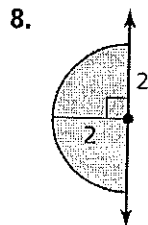
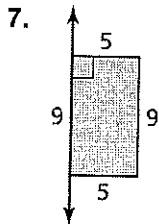
In Exercises 1–3, tell whether the solid is a polyhedron. If it is, name the polyhedron.



In Exercises 4–6, describe the cross section formed by the intersection of the plane and the solid.



In Exercises 7–9, sketch the solid produced by rotating the figure around the given axis. Then identify and describe the solid.



10. Is the block shown a polyhedron? Explain your reasoning.

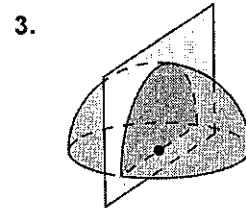
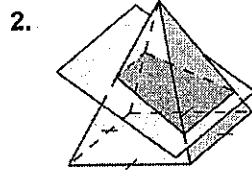
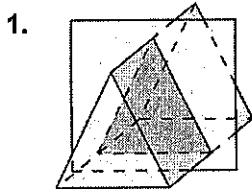


11. Sketch a cube. Is it possible for a cross section of a cube to be a square? Explain your reasoning. If so, describe or sketch two different ways in which the plane could intersect the solid.
12. Consider the rectangular prism in Exercise 1. The length of the prism is 4 inches, the width is 2 inches, and the height is 2 inches.
- What is the perimeter of the cross section?
  - What is the area of the cross section?

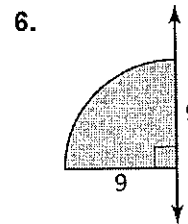
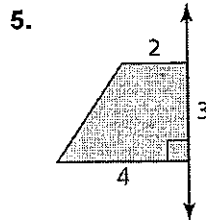
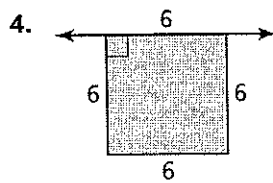
# 11.4

## Practice B

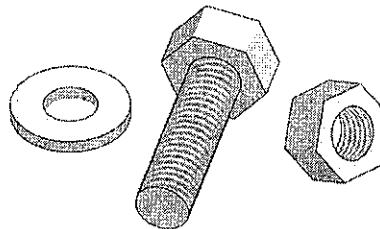
In Exercises 1–3, describe the cross section formed by the intersection of the plane and the solid.



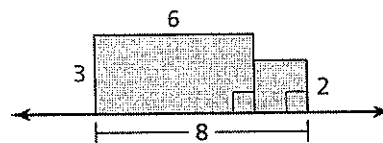
In Exercises 4–6, sketch the solid produced by rotating the figure around the given axis. Then identify and describe the solid.



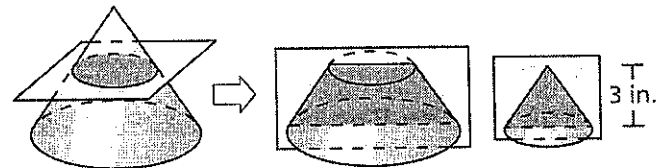
7. Which of the parts shown are polyhedrons? Explain your reasoning.



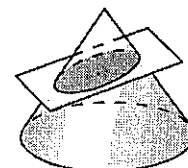
8. Sketch the composite solid produced by rotating the composite figure around the given axis. Then identify and describe the composite solid.



9. A cone with a height of 6 inches and radius of 4 inches is sliced in half by a horizontal plane, creating a circular cross section with a radius of 2 inches. Each piece is then sliced in half by a vertical plane, as shown.



- Describe the shape formed by each cross section.
- What are the perimeters and areas of the cross sections?
- Suppose the horizontal plane is tilted, slicing the original cone as shown at the right. Is the cross section a circle? If it is not, describe how it is different from a circle and sketch the cross section.

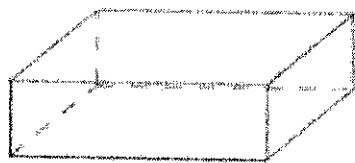




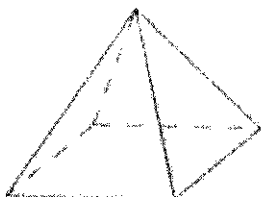
3D Solids

**Types of Solids**

**Polyhedra**

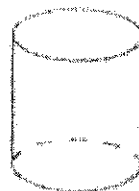


prism

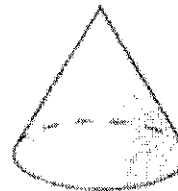


pyramid

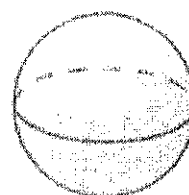
**Not Polyhedra**



cylinder



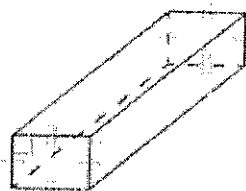
cone



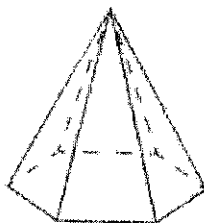
sphere

Tell whether each solid is a polyhedron. If it is, name the polyhedron.

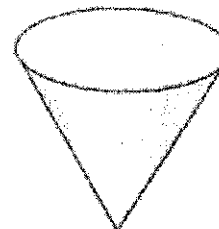
a.



b.

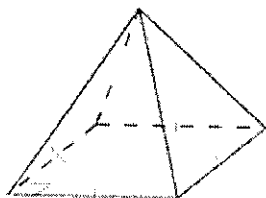


c.

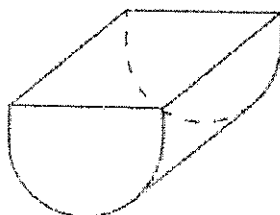


Tell whether the solid is a polyhedron. If it is, name the polyhedron.

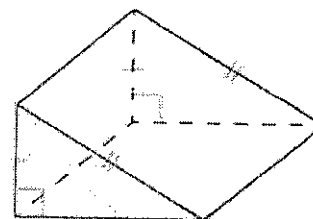
1.



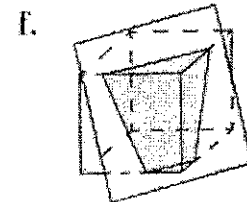
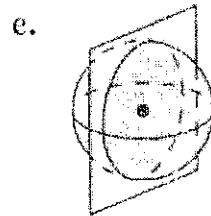
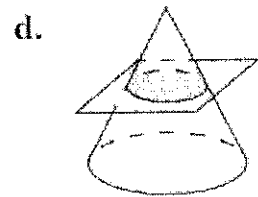
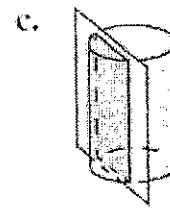
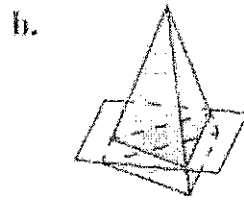
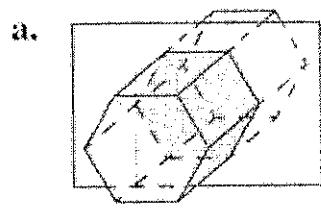
2.



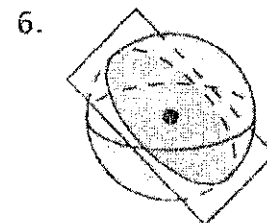
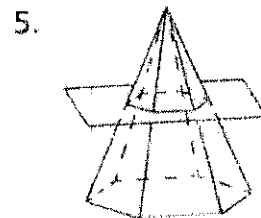
3.



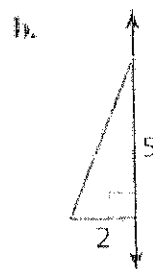
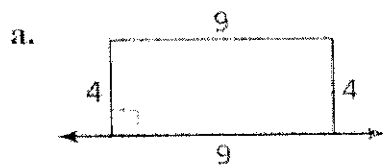
Describe the shape formed by the intersection of the plane and the solid.



Describe the shape formed by the intersection of the plane and the solid.



Sketch the solid produced by rotating the figure around the given axis. Then identify and describe the solid.



Sketch the solid produced by rotating the figure around the given axis. Then identify and describe the solid.

