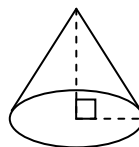


Vocabulary

Cone

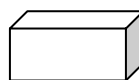
A three-dimensional figure with a circular base and one vertex

**Great Circle**

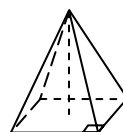
The intersection of a sphere and a plane such that the plane contains the center of the sphere; divides the sphere into two equal hemispheres

**Prism**

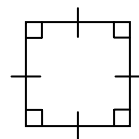
A figure in space that has two parallel and congruent bases in the shape of polygons

**Pyramid**

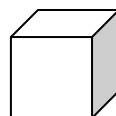
A figure in space with three or more triangular faces and a base in the shape of a polygon

**Regular polygon**

A polygon that is equilateral (equal sides) and equiangular (equal angles)

**Regular polyhedron**

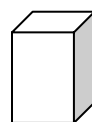
A polyhedron in which all faces are congruent regular polygons, and the same number of faces meet at each vertex in exactly the same way

**Sphere**

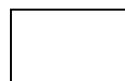
A three-dimensional figure made up of all points that are equally distant from a point called the center

**Three-dimensional objects**

Objects existing in three dimensions; having length, width, and height

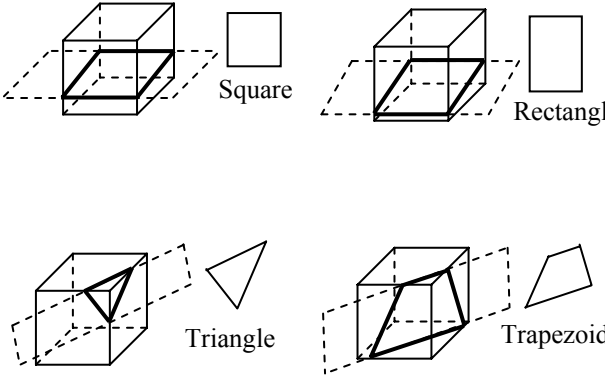
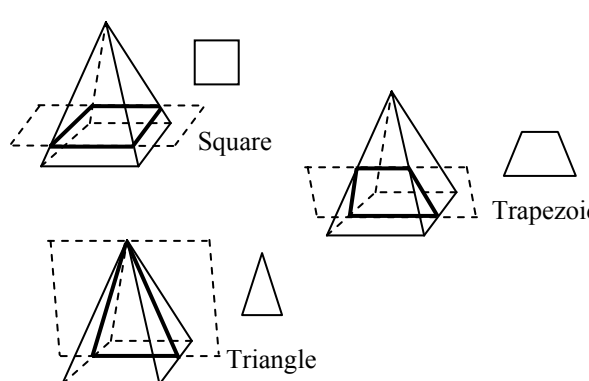
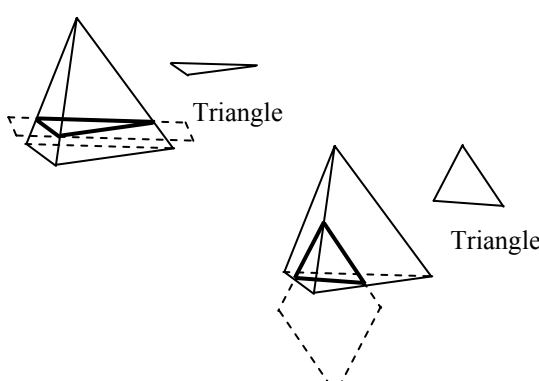
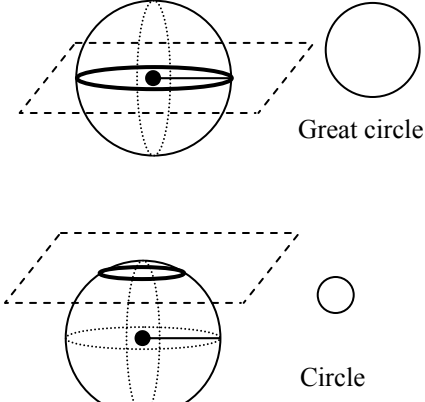
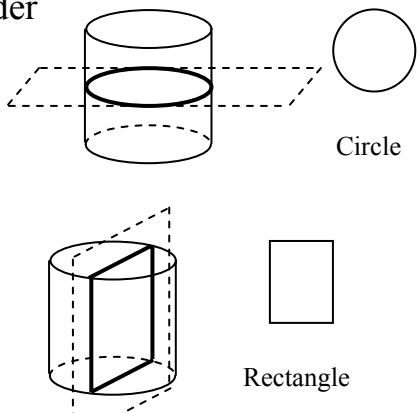
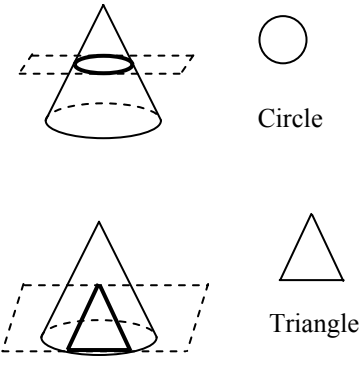
**Two-dimensional objects**

Objects existing in two dimensions; having length and width



Don't Be Cross With Me

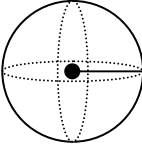
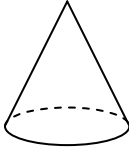
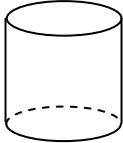
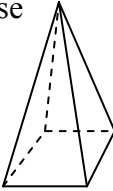
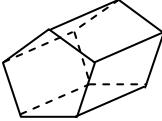
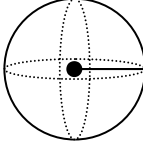
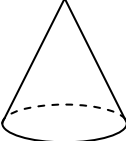
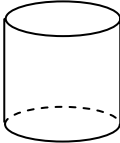
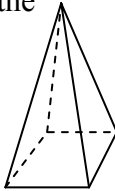
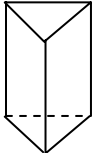
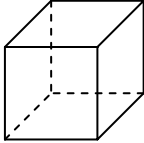
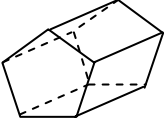
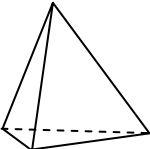
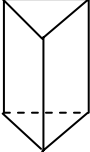
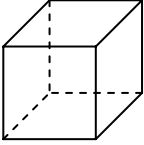
The cross section of a three-dimensional figure shows the intersection of the three-dimensional figure with a plane.

Cube  Square Rectangle Triangle Trapezoid	Square Pyramid  Square Trapezoid Triangle
Triangular Pyramid  Triangle Triangle	Sphere  Great circle Circle
Cylinder  Circle Rectangle	Cone  Circle Triangle

Name _____

Why Did the Plane Cross the Figure?

Directions: Sketch and state the figure that is the cross section described for the given figure and the stated plane.

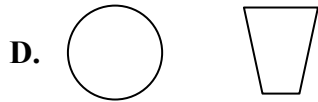
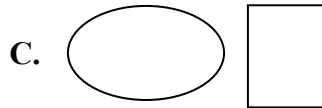
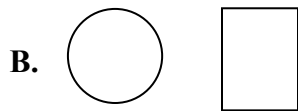
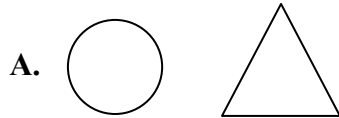
1. Passing through the center 	2. Parallel to the base 	3. Parallel to the base 
4. Parallel to the base 	5. Parallel to the base (the pentagon is the base) 	6. Passing through the top with a horizontal plane 
7. Perpendicular to the base passing through the vertex 	8. Perpendicular to the base 	9. Perpendicular to the base passing through the vertex 
10. Parallel to the base 	11. Parallel to the base 	12. Perpendicular to the base (the pentagon is the base) 
13. Parallel to the base 	14. Perpendicular to the base 	15. At an angle with the base and passes through both the front and back sides of the figure 

Name _____

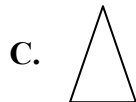
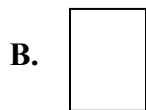
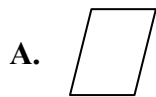
Cross Sectional

Directions: Read each problem carefully. Solve each problem and show your work. Then choose the correct answer from the list of choices. If no answer choices are available, write your answer in the space provided.

1. Which of the following could represent cross sections of a cylinder?



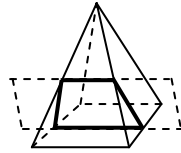
2. Which of the following shapes shows a cross section of a triangular prism that is perpendicular to the base?



3. Which of the following figures does not have a triangular cross section?

- A. A square pyramid
- B. A cone
- C. A rectangular prism
- D. A cylinder

4. A plane intersects a square pyramid at an angle oblique to its base. What describes the shape of the cross section that is produced?



- A. square
- B. trapezoid
- C. triangle
- D. rectangle

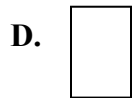
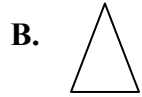
5. Which of the following shows a cross section that is parallel to the base of a pentagonal prism?

- A.
- B.
- C.
- D.

6. Which of the following are possible cross sections of a cube?

- I. Square
 - II. Rectangle
 - III. Trapezoid
- A. I only
 - B. I and II only
 - C. II and III only
 - D. I, II, and III

7. Which of the following is a cross section that is parallel to the base of a cone?



8. All the following correctly identify a correct cross section for a square pyramid except for which one?

- A. Square if it is parallel to the base
- B. Square if it is perpendicular to the base
- C. Triangle if it is perpendicular to the base
- D. Triangle if it intersects the base at an angle that is not perpendicular

9. Sketch a cross section that is perpendicular to the base of a cylinder and a cross section that is parallel to the base of a cylinder.

10. Sketch a cross section for each of the following figures:

a) sphere

b) hexagonal pyramid, parallel to the base

c) triangular prism, perpendicular to the base