Name Mr. Schlansky Date Geometry

Cross Sections

1. A plane intersects a cylinder perpendicular to its bases.

This cross section can be described as a

- 1) rectangle
- 2) parabola

- - 4) circle

3) triangle

3) triangle

4) circle

2. A plane intersects a cylinder parallel to its bases.

This cross section can be described as a

- 1) rectangle
- 2) parabola
- 3. A right hexagonal prism is shown below. A two-dimensional cross section that is perpendicular to the base is taken from the prism.

Which figure describes the two-dimensional cross section?

- 1) triangle
- 2) rectangle
- 3) pentagon
- 4) hexagon

4. A right hexagonal prism is shown below. A two-dimensional cross section that is parallel to the base is taken from the prism.

Which figure describes the two-dimensional cross section?

- 1) triangle
- 2) rectangle
- 3) pentagon
- 4) hexagon









5. A square pyramid is intersected by a plane passing through the vertex and parallel to the base.

Which two-dimensional shape describes this cross section?

- 1) square
- 2) triangle

- pentagon
 rectangle

6. A square pyramid is intersected by a plane passing through the vertex and perpendicular to the base.

Which two-dimensional shape describes this cross section?

- 1) square
- 2) triangle

pentagon
 rectangle



7. In the diagram below, a plane intersects a square pyramid parallel to its base.

Which two-dimensional shape describes this cross section?

- circle
 square
- triangle
 pentagon



Which two-dimensional shape describes this cross section?

- 1) circle 3) triangle
- 2) square 4) pentagon





9. Which figure can have the same cross section as a sphere?



10. William is drawing pictures of cross sections of the right circular cone below.

Which drawing can *not* be a cross section of a cone?





11. The right prism with a triangular base shown below is cut by a plane perpendicular to its bases.



The two-dimensional shape of the cross section is always a

- 1) triangle 3) pentagon 4) rectangle
- 2) rhombus

12. A plane intersects a hexagonal prism. The plane is perpendicular to the base of the prism. Which two-dimensional figure is the cross section of the plane intersecting the prism?

1) triangle	3) hexagon
2) trapezoid	4) rectangle

13. A right cylinder is cut perpendicular to its base. The shape of the cross section is a

- 1) circle
- 2) cylinder
- 3) rectangle
- 4) triangular prism

14. The cross section of a regular pyramid contains the altitude of the pyramid. The shape of this cross section is a

- 1) circle
- 2) square
- 3) triangle
- 4) rectangle

15. A two-dimensional cross section is taken of a three-dimensional object. If this cross section is a triangle, what can *not* be the three-dimensional object?

1) cone

- 3) pyramid
- 2) cylinder 4) rectangular prism

16. A plane intersects a sphere. Which two-dimensional shape is formed by this cross section?

3) square

4) circle

- 1) rectangle
- 2) triangle

17. Which is *not* a possible two-dimensional cross section of a three-dimensional cylinder?1) circle2) rectangle3) ellipse4) triangle

18. Which figure(s) below can have a triangle as a two-dimensional cross section?

- I. cone
- II. cylinder
- III. cube
- IV. square pyramid

1) I, only 2) IV, only 3) I, II, and IV, only 4) I, III, and IV, only