Cross Sections

1.

William is drawing pictures of cross sections of the right circular cone below.
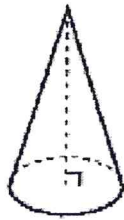
Which drawing can *not* be a cross section of a cone?

(1)

(3)

(2)

(4)

2.

Which is *not* a possible two-dimensional cross section of a three-dimensional cylinder?

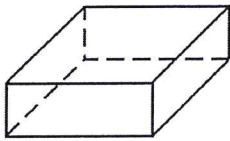(1) circle   (2) rectangle   (3) ellipes   (4) triangle

3.

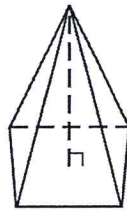Which type of shape can represent a two-dimensional cross-section of a sphere?

(1) circular   (2) triangular   (3) square   (4) rectangular

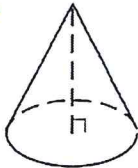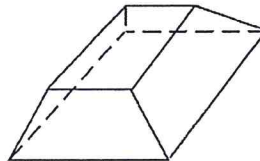4. Which figure can have the same cross section as a sphere?

1)

3)

2) ✗

4)

5.   Jennifer is trying to determine if there is any difference in shape for various horizontal cross sections of a cone. She works with two cones that are similar to the one pictured below. Jennifer takes a cross-section of the first cone that is parallel to the base of the cone. Next she takes a cross section of the second cone that is slanted 5 degrees from parallel. What were her results?
(1) The cross sections were both circles.
(2) The cross sections were both ellipses.
(3) The first cross section was a circle and the second cross section was an ellipse.
(4) The first cross section was an ellipse and the second cross section was a circle.
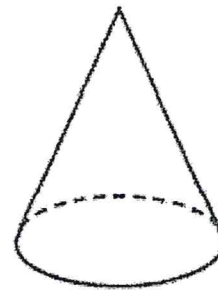
6.

a) Identify two possible two-dimensional cross-sections that can be made of a three-dimensional cube.
_____rectangle_____ and _____triangle_____
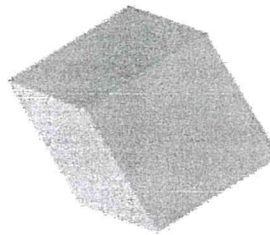
b) Identify a two-dimensional cross-section that is *not* possible to cut from a cube. _____circle_____

7.

     A pyramid is sliced horizontally into ten solids of equal height from the top of the pyramid to its base. Which of the following is a *possible* description of the faces of the resulting solids?
(1) circles with increasing radii   (3) squares with increasing side lengths
(2) circles with uniform radii   (4) squares with uniform side lengths