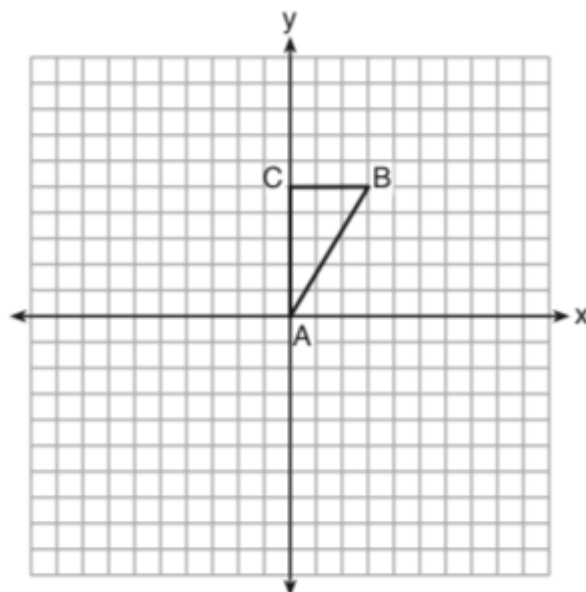
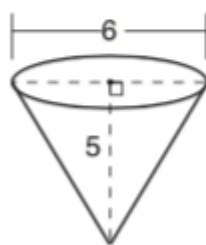


8-6DN-Cross-sections

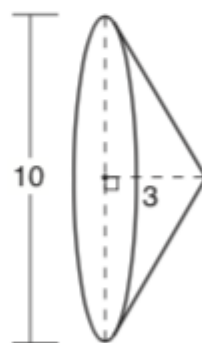
Triangle ABC , with vertices at $A(0,0)$, $B(3,5)$, and $C(0,5)$, is graphed on the set of axes shown below.



Which figure is formed when $\triangle ABC$ is rotated continuously about \overline{BC} ?



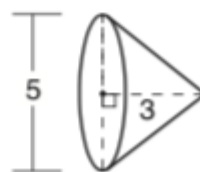
(1)



(3)

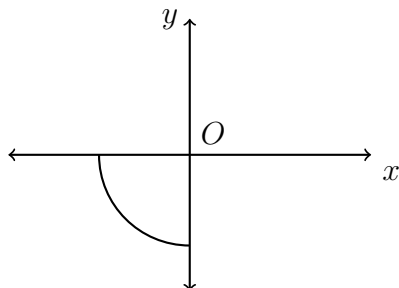


(2)



(4)

1.



(a) cone
(b) sphere

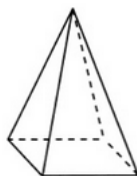
(c) cylinder
(d) hemisphere

3. A student has a rectangular postcard that he folds in half lengthwise. Next, he rotates it continuously about the folded edge. Which three dimensional object below is generated by this rotation?

(a) cone



(b) pyramid



(c) cylinder



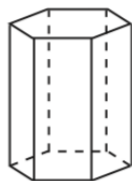
(d) rectangular prism



4. If a rectangle is continuously rotated around one of its sides, what is the three-dimensional figure formed?
- (a) cone (c) cylinder
(b) sphere (d) rectangular prism
5. Which three-dimensional figure will result when a rectangle 6 inches long and 5 inches wide is continuously rotated about the longer side?
- (a) a rectangular prism with a length of 6 inches, width of 6 inches, and height of 5 inches
(b) a rectangular prism with a length of 6 inches, width of 5 inches, and height of 5 inches
(c) a cylinder with a radius of 5 inches and a height of 6 inches
(d) a cylinder with a radius of 6 inches and a height of 5 inches
6. An isosceles right triangle whose legs measure 6 is continuously rotated about one of its legs to form a three-dimensional object. The three-dimensional object is a
- (a) cylinder with a diameter of 6
(b) cylinder with a diameter of 12
(c) cone with a diameter of 6
(d) cone with a diameter of 12
7. If an equilateral triangle is continuously rotated around one of its medians, which 3-dimensional object is generated?
- (a) cone
(b) sphere
(c) pyramid
(d) prism

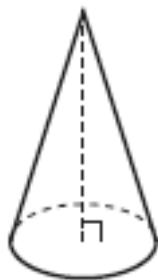
Cross sections of solids

8. 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?

- | | |
|---------------|--------------|
| (a) rectangle | (c) pentagon |
| (b) triangle | (d) hexagon |
9. A right cylinder is cut perpendicular to its base. The shape of the cross section is a
- | | |
|--------------|----------------------|
| (a) circle | (c) rectangle |
| (b) cylinder | (d) triangular prism |
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?

- (a) square



- (b) triangle



- (c) parabola

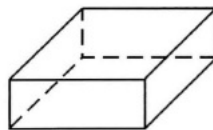


- (d) ellipse

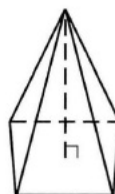


11. Which figure can have the same cross section as a sphere?

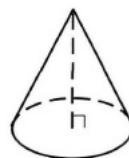
(a) rectangular prism



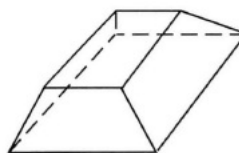
(b) pyramid



(c) cone



(d) truncated pyramid



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

(a) circle

(c) triangle

(b) square

(d) rectangle

13. 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?

(a) cylinder

(c) cone

(b) pyramid

(d) rectangular prism

14. 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?

(a) rectangle

(c) trapezoid

(b) triangle

(d) hexagon