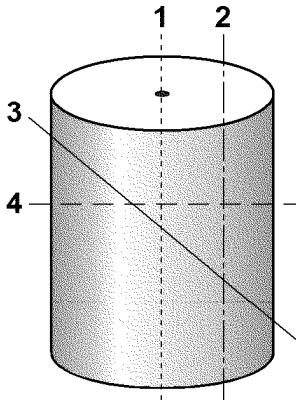


Name: _____
 CC Geometry

Solids, Cross Sections and Rotations

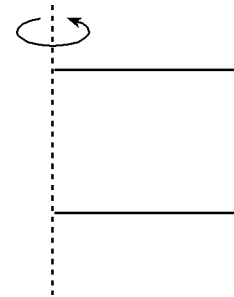
Questions 1 and 2 refer to the following:

The diagram below shows a right circular cylinder with four possible cutting paths, 1, 2, 3, and 4.

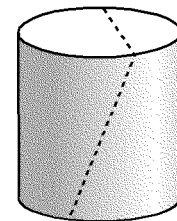


- 1) Which of the following statements *best* describes the difference in two-dimensional shapes resulting from cross-sections along path 1 and path 2 in the given diagram?
- Cross-section 2 is a dilation of cross-section 1.
 - Cross-sections 1 and 2 are exactly the same shape and size.
 - Cross-section 2 has greater surface area than cross-section 1.
 - Cross-section 2 is narrower than cross-section 1.
- 2) What two-dimensional shape will result from a cross-section along path 4 in the given diagram?
- parabola
 - circle
 - rectangle
 - oval

- 3) What three-dimensional shape is generated by rotating this two-dimensional rectangle about the dotted-line axis?



- sphere
 - cylinder
 - prism
 - cone
- 4) The diagram below represents a cylinder that has been cut along the path shown.

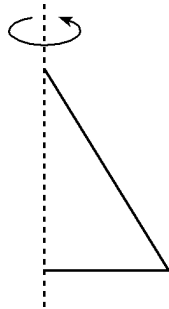


What is the shape of the two-dimensional surface that results from this cross-section?

-
-
-
-

- 5) Which one of the following explains how to form a sphere from a circle?
- A) rotate the circle about either axis
 - B) fold the circle in half and rotate it about a radius
 - C) rotate a circle about a diameter
 - D) rotate a circle about a tangent

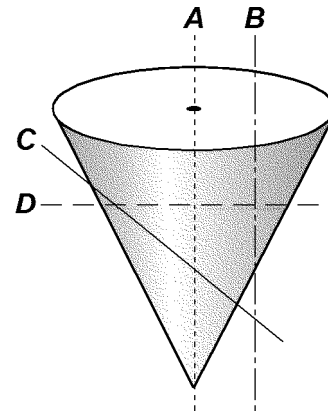
- 6) What three-dimensional shape is generated by rotating this two-dimensional triangle about the dotted-line axis?



- A) cone
- B) sphere
- C) prism
- D) cylinder

Questions 7 and 8 refer to the following:

The diagram below shows a right circular cone with four possible cutting paths, *A*, *B*, *C*, and *D*.



- 7) What letter in the given diagram represents the path that, when cut, would result in an oval cross-section?
- A) *A* and *C*, only
 - B) *D*, only
 - C) *C*, only
 - D) *C* and *D*, only
- 8) What letter in the given diagram represents the path that, when cut, would result in a triangular cross-section?
- A) *A*, *B*, and *C*, only
 - B) *A* and *B*, only
 - C) *A*, only
 - D) *A* and *C*, only

- 1) D 2) B 3) B 4) A 5) C
6) A 7) C 8) C