Name_____ Date_____ Block_____ Cross Sections and 2D to 3D

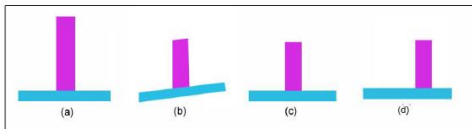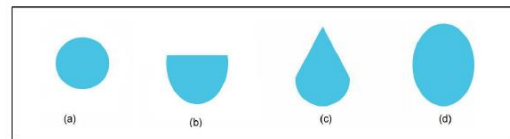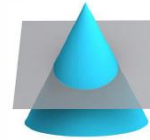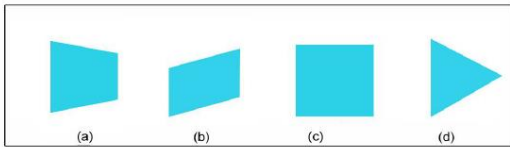Circle the cross-section you would see when the grey cutting plane slices the object. Imagine that you are facing the cutting plane head-on, as if you were looking in a mirror. Make your choice based on the shapes of the possible answers, not their sizes.

| (a) | (b) | (c) | (d) |

| (a) | (b) | (c) | (d) |

| (a) | (b) | (c) | (d) |

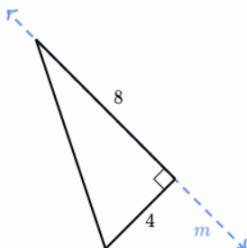| (a) | (b) | (c) | (d) |
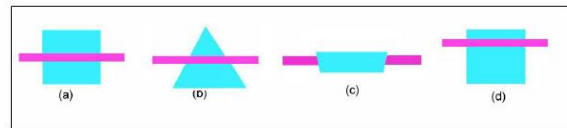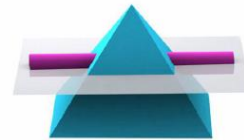
Converting 2D shapes to 3D.

For the following problems be sure to identify the height and radius of each figure formed.
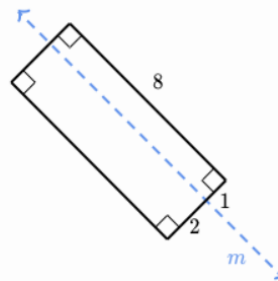
Consider the following figure:
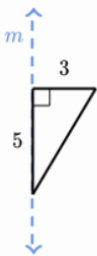
What solid 3D object is produced by rotating the triangle about line m?
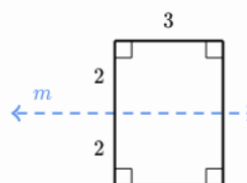
Consider the following figure:

What solid 3D object is produced by rotating the triangle about line m?

Consider the following figure:

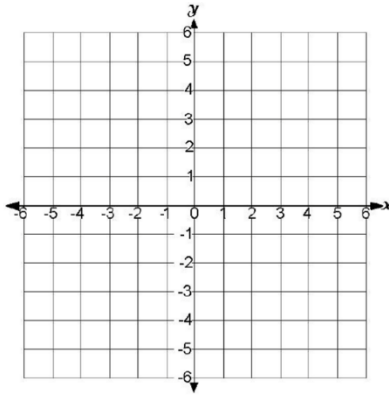**What solid 3D object is produced by rotating the rectangle about line m?**

Consider the following figure:

What solid 3D object is produced by rotating the rectangle about line m?

Converting 2D to 3D

1. Describe in detail the solid formed by rotating a 4 x 2 rectangle with vertices (1, 0), (5, 0), (1, 2) and (5, 2) about the *x*-axis. Include the dimensions of the solid in your description.

2. Describe in detail the solid formed by rotating a 2x4 rectangle with vertices (1, 0), (3, 0), (1, 4) and (3, 4) about the *y*-axis. Include the dimensions of the solid in your description.
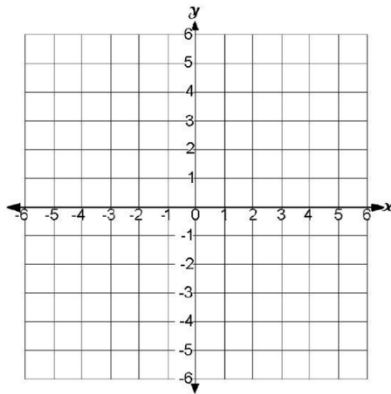
1. Describe in detail the solid formed by rotating a right triangle with vertices at (0, 3), (-4, 3), and (0, -2) about the vertical axis. Include the dimensions of the solid in your description.
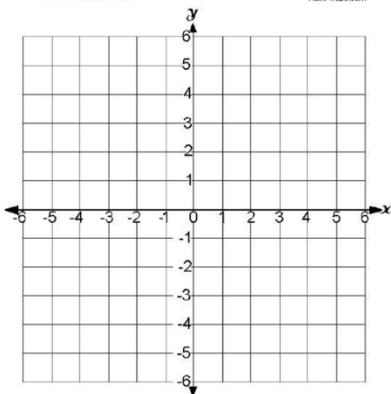
    b. Would these dimensions change if you rotated it around the horizontal axis? Why or why not?