

## Indicators

### Objective:

#### 3.01 Using three-dimensional figures:

- a) Identify, describe, and draw from various views (top, side, front, corner).
- b) Build from various views.
- c) Describe cross-sectional views.

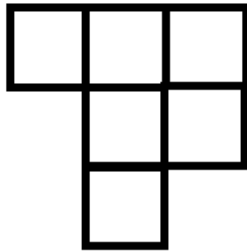
Vocabulary and Resources		
3-d figure	cone	isometric view
prism	sphere	bird's eye view
pyramid	polyhedron	isometric dot paper
cylinder	net	linking cubes

**A.** After viewing this figure built from blocks, ask students to draw the two-dimensional polygons that are a front, back, top, left, and bottom view of the figure. What is the corner view from point *A*? from point *B*?

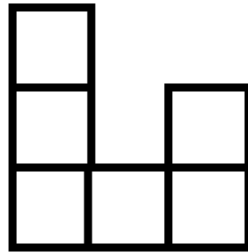
**B.** What is the top view of a globe (sphere) cut at the equator? cut just below the north pole?

**C.** If a cone is cut parallel to its base what do the cross-sections look like?

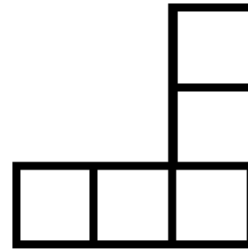
**D.** The following diagrams give the top, front, and side view of a three-dimensional figure. Use cubes to build the figure.



Top

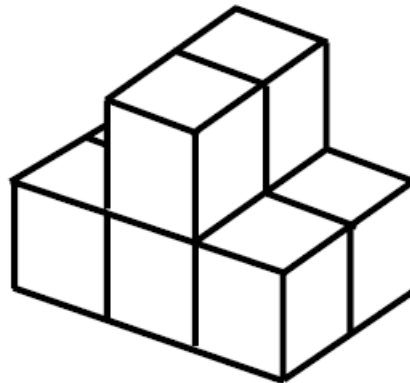


Front



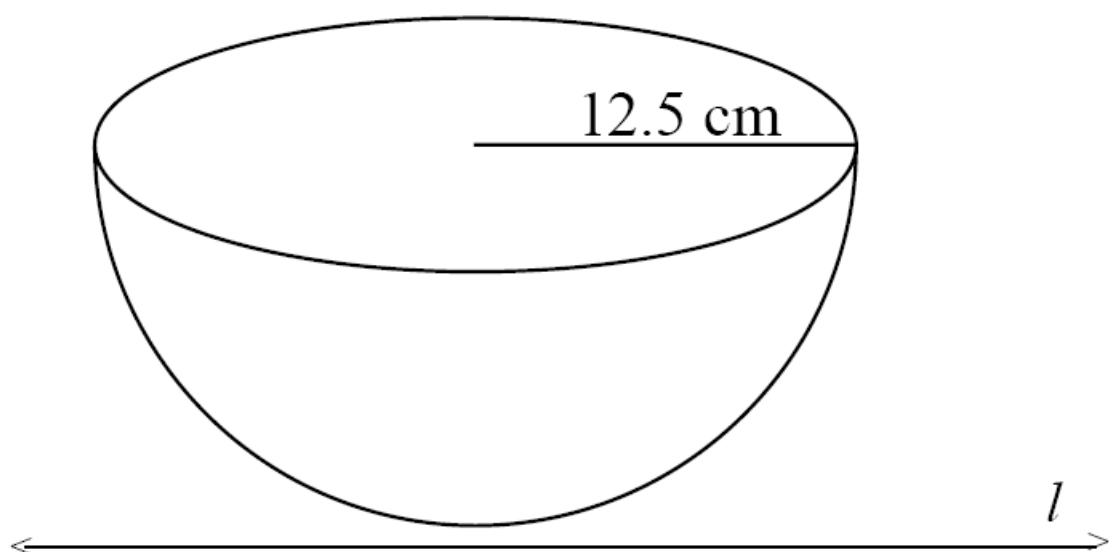
Right Side

**E.** Which of the statements below is (are) true about this structure built with cubes?



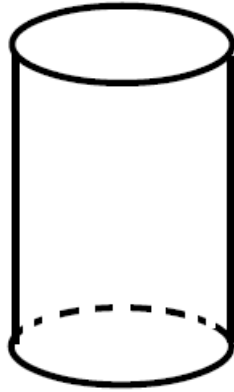
1. There are at least seven cubes in the structure.
2. Part of the structure is two cubes high.
3. There are two cubes on the top level.
4. There are six cubes on the bottom level.
5. There is a total of six cubes in the structure.

**F.** Using a collection of cubes, construct a figure that has at least nine cubes, is three cubes high at one point, and has at least six cubes on the bottom layer. Draw a sketch of the figure.



**G.** If this hemisphere is sliced perpendicular to line  $l$ , what do the cross-sections look like? If it is sliced parallel to line  $l$  are the cross-sections different?

**H.** If this cylinder is cut parallel to the base, describe the cross-sectional view. If the cylinder is cut perpendicular to the base describe the cross-sectional view. If the cut is made neither perpendicular nor parallel to the base, describe the cross-sectional view.



**I.** If a rectangular prism is sliced diagonally from segment  $AB$  to segment  $GH$  describe the results.

