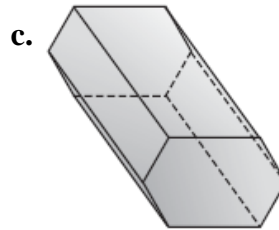
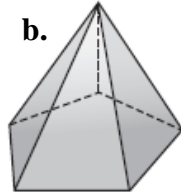
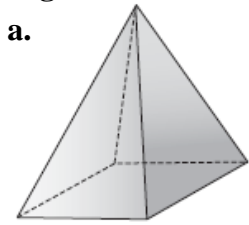


# 7-4 Skills Practice: Three-Dimensional Figures

Show work for all problems!

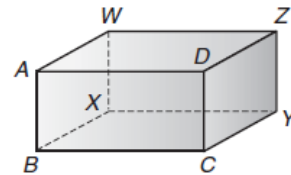
1. Identify each solid. Name the number and shapes of the faces. Then name the number of edges and vertices.



2. In the diagram at the right:

a. Name a plane that is parallel to plane  $ABCD$ . \_\_\_\_\_

b. Identify a segment that is skew to segment  $YZ$ . \_\_\_\_\_



3. Sailing ships once used deck prisms to allow sunlight to reach below the main deck. One such deck prism is shown at the right.

a. Identify the solid.

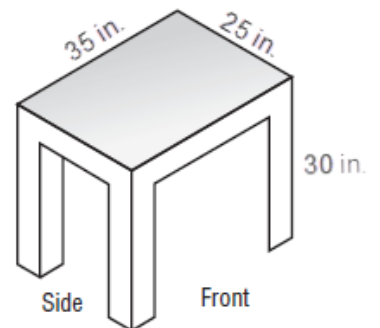
b. Name the number and shapes of the faces.



c. State the number of edges and vertices.

4. Refer to the architectural drawing of a table to answer the following:

a. Draw and label the top, front, and side views of the table.

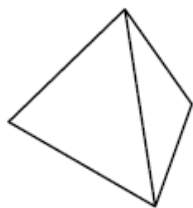


a. Find the overall height of the table in feet.

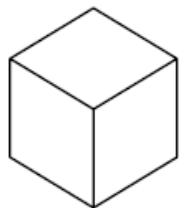
b. Find the area of the shaded region in square feet and square inches

## The Five Platonic Solids

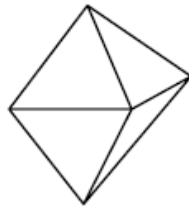
5. There are only five regular convex solids. They are called the *Platonic Solids* and are shown here.



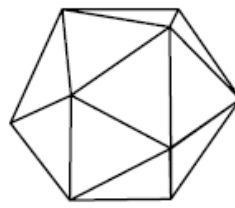
tetrahedron



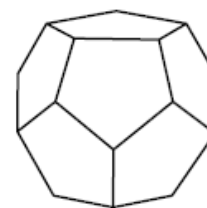
hexahedron



octahedron

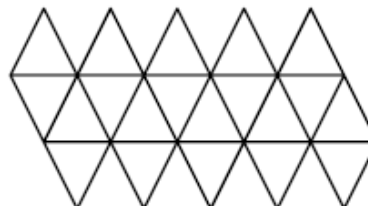
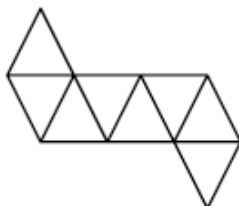
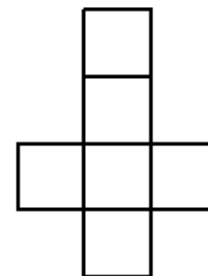
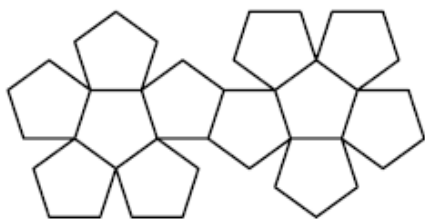


icosahedron



dodecahedron

6. Write the name of each Platonic Solid under its net.



7. Complete this chart for the Platonic Solids.

Solid	Tetrahedron	Hexahedron	Octahedron	Icosahedron	Dodecahedron
Number of Faces					
Number of Edges					
Number of Vertices					

8. Write an equation relating the number of faces, edges, and vertices of the Platonic Solids. This equation is called Euler's Formula and is true for all simple polyhedra.