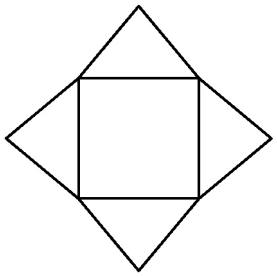
Name: _____ Date: _____

BLM 6–17

Chapter 6 Practice Test

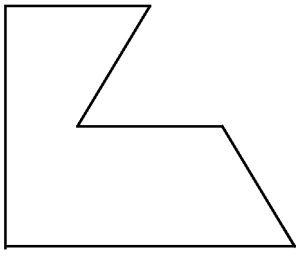
1. Is each statement true (T) or false (F)?
- **a)** The golden ratio can apply to a circle.
- **b)** Any triangle can be used to tessellate a plane.
- **c)** Isometric perspective drawings are the easiest representations to visualize.
- **d)** A net is a representation of a three-dimensional object that can be folded to form the object.
- **e)** A net can be separated into pieces to form a pattern.

2. What geometric shape can be made from this net?



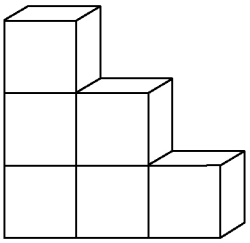
3. Use these two orthographic drawings to draw a top view of the object.

Side view



Front view

4. Create an isometric perspective drawing of this object.



5. A plan for a house that is 30 ft by 25 ft is to be drawn on a sheet of paper that is 12 in. by 12 in.
- **a)** What scale should be used so that the drawing almost fills the page?
- **b)** A room in the plan of the house measures 3 in. by 5 in. Use your scale from part a) to determine the actual dimensions of the room.

6. **a)** Draw a net for a gift box with a volume of 200 cm^3.
- **b)** Choose an appropriate scale. Use this scale to find the new dimensions of the gift box if it is to have volume 1600 cm^3.

7. Suppose that you have 2000 cm^2 of material available to create a three-dimensional object with the greatest possible volume. The material can be formed into a cylinder, a square-based prism, or a sphere.
- **a)** Predict which object will have the greatest volume.
- **b)** Determine the dimensions of each object so it has maximum volume.
- **c)** Determine the volume of each object.