12-1 Practice
Representations of Three-Dimensional Figures

Use isometric dot paper to sketch each prism.

1. rectangular prism 3 units high, 3 units long, and 2 units wide
2. triangular prism 3 units high, whose bases are right triangles with legs 2 units and 4 units long

Use isometric dot paper and each orthographic drawing to sketch a solid.

3.

4.

Sketch the cross section from a vertical slice of each figure.

5.

6.

7. SPHERES Consider the sphere in Exercise 5. Based on the cross section resulting from a horizontal and a vertical slice of the sphere, make a conjecture about all spherical cross sections.
**12-2 Practice**  
*Surface Areas of Prisms and Cylinders*

Find the lateral and surface area of each prism. Round to the nearest tenth if necessary.

1. 

2. 

3. 

4. 

Find the lateral area and surface area of each cylinder. Round to the nearest tenth.

5. 

6. 

7. Management decides to enclose stairs connecting the first and second floors of a parking garage in a stairwell shaped like an oblique rectangular prism. What is the lateral surface area of the stairwell? 

8. A cake is made by placing one cylinder on top of another. Both cylinders have a height of 18 in. The top cylinder has a radius of 18 in. and the bottom cylinder has a radius of 36 in. What is the surface area of the part of the cake that will have frosting?