

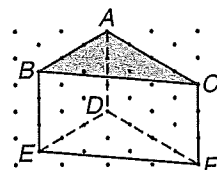
# 12-1 Study Guide and Intervention *(continued)*

## Representations of Three-Dimensional Figures

**Drawings of Three-Dimensional Figures** To work with a three-dimensional object, it can be useful to draw different views. The view of a figure from a corner is called the **corner view** or **perspective view**. An orthographic drawing includes a two-dimensional top view, left view, front view, and right view of a three-dimensional.



**Example 1** Use isometric dot paper to sketch a triangular prism with 3-4-5 right triangles as bases and with a height of 3 units.



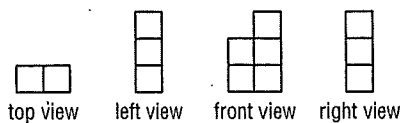
**Step 1** Draw  $\overline{AB}$  at 3 units and draw  $\overline{AC}$  at 4 units.

**Step 2** Draw  $\overline{AD}$ ,  $\overline{BE}$ , and  $\overline{CF}$ , each at 3 units.

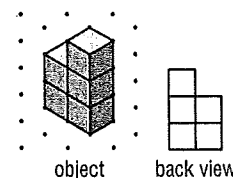
**Step 3** Draw  $\overline{BC}$  and  $\triangle DEF$ .

**Example 2** Draw the back view of the figure given the orthogonal drawing.

- The top view indicates two columns.
- The right and left views indicate that the height of figure is three blocks.
- The front view indicates that the columns have heights 2 and 3 blocks.



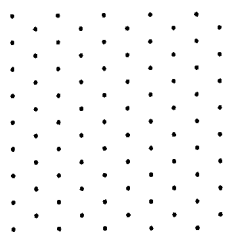
Use blocks to make a model of the object. Then use your model to draw the back view. The back view indicates that the columns have heights 3 and 2 blocks.



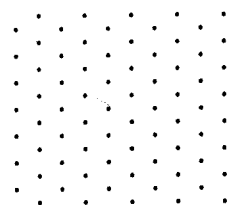
### Exercises

Sketch each solid using isometric dot paper.

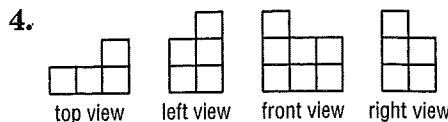
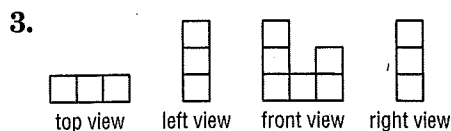
1. cube with edge 4



2. rectangular prism 1 unit high, 5 units long, and 4 units wide



Draw the back view and corner view of a figure given each orthographic drawing.



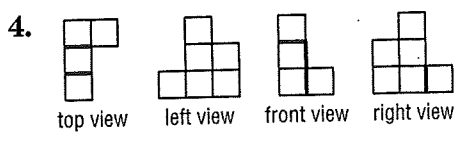
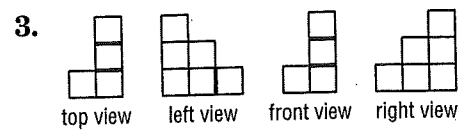
# 12-1 Skills Practice

## Representations of Three-Dimensional Figures

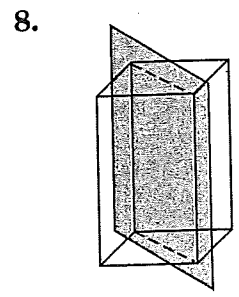
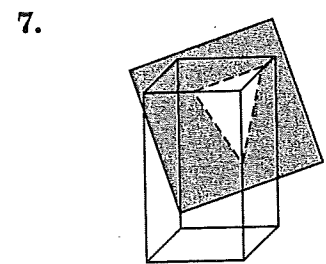
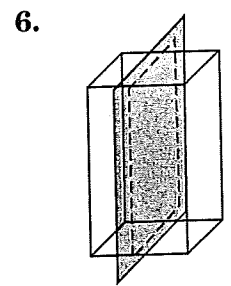
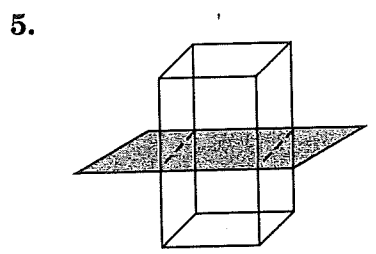
Sketch each solid using isometric dot paper.

- cube 2 units on each edge
- rectangular prism 2 units high, 5 units long, and 2 units wide

Draw the back view and corner view of a figure given each orthogonal drawing.



Determine the shape resulting from each cross section of the square prism.



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