

FINISHED TOP VIEW DRAWING

FIGURE 1

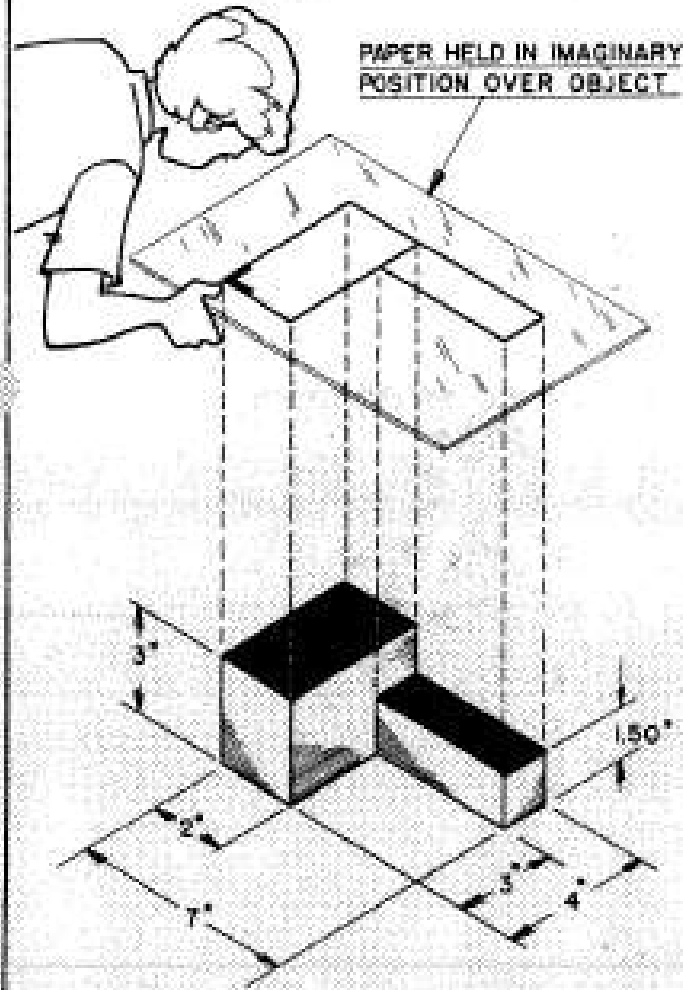


FIGURE 2

## HOW TO DRAW A TOP VIEW

### Information

To draw a TOP VIEW of an object, first imagine you are holding your paper directly above the object and looking down on it as shown in Figure 2. If you do this you will be able to see only the solid blue surfaces of the object. Drawing the outlines of these surfaces only, exactly as they look, is called drawing a TOP VIEW. Figure 1 shows how the TOP VIEW drawing of the object shown in Figure 2 will appear when finished.

### Assignment

On the following pages (9, 10, 11, and 12) are pictorial drawings of eight different objects. A person is shown holding a sheet of paper over each object. On the paper is a drawing of the surfaces as the person sees them. You are to draw a finished TOP VIEW of each of these objects in each squared section given, in the same manner as shown in Figure 1. Start each drawing at the "heavy corner" given in each squared section and corresponding to the "heavy corner" shown in the drawing on the paper being held over the object. Allow one square to equal one inch.

## HOW TO DRAW A FRONT VIEW

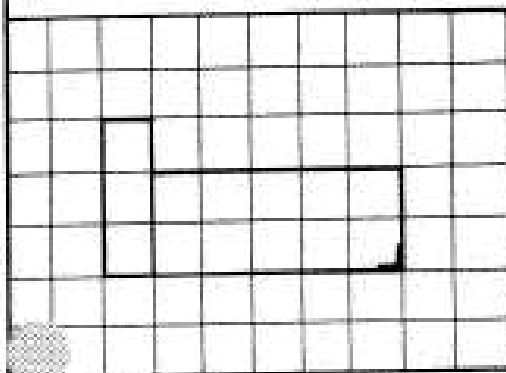
### Information

To draw a **FRONT VIEW** of an object, first imagine you are holding your paper in front of the object and looking at it as shown in Figure 2. If you do this you will only be able to see the solid blue surfaces of the object. Drawing the outlines of these surfaces only, exactly as they look, is called drawing a **FRONT VIEW**. Figure 1 shows how the **FRONT VIEW** drawing of the object shown in Figure 2 will appear when finished.

### Assignment

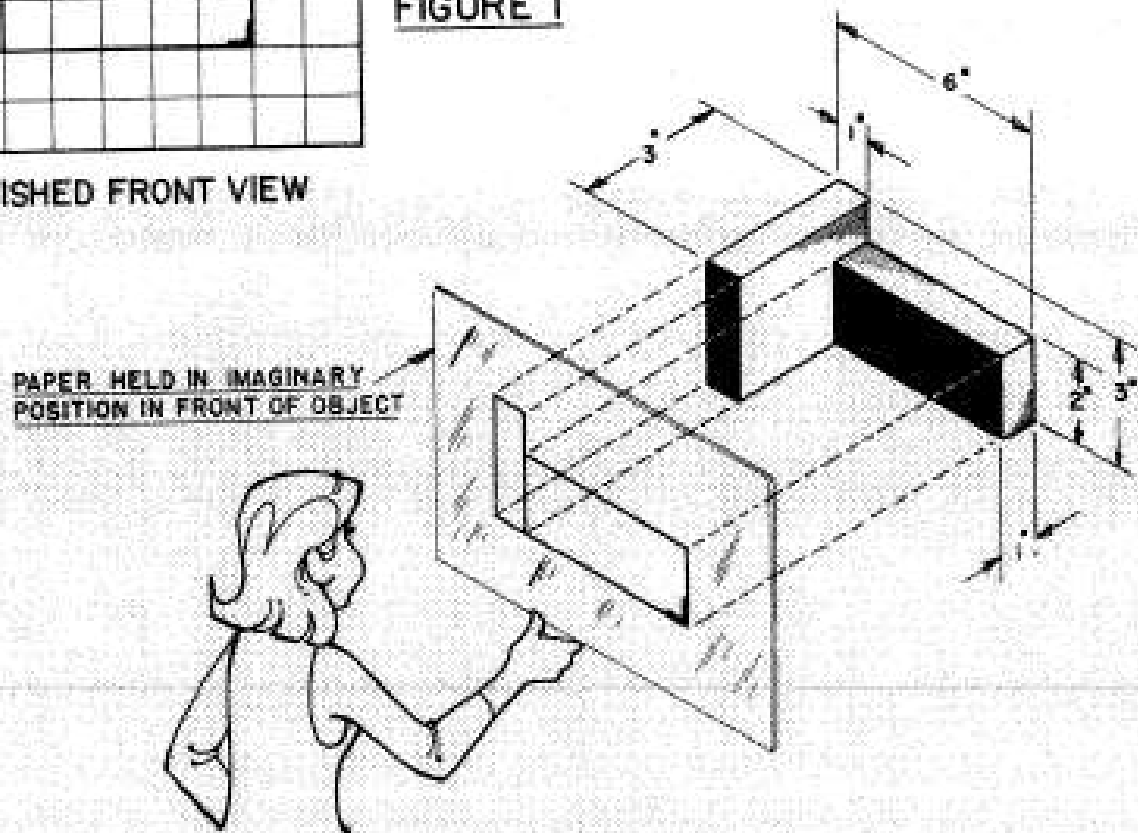
On the following pages (14, 15, 16, and 17) are pictorial drawings of eight different objects. A person is shown holding a sheet of paper directly in front of each object. On the paper is a drawing of the surfaces as the person sees them.

You are to draw a finished **FRONT VIEW** of each of these objects in each squared section given, in the same manner as shown in Figure 1. Start each drawing at the "heavy corner" given in each squared section and corresponding to the heavy corner shown in the drawing on the paper being held by the person in each picture. Allow one square to equal one inch.



**FINISHED FRONT VIEW**

**FIGURE 1**



**FIGURE 2**

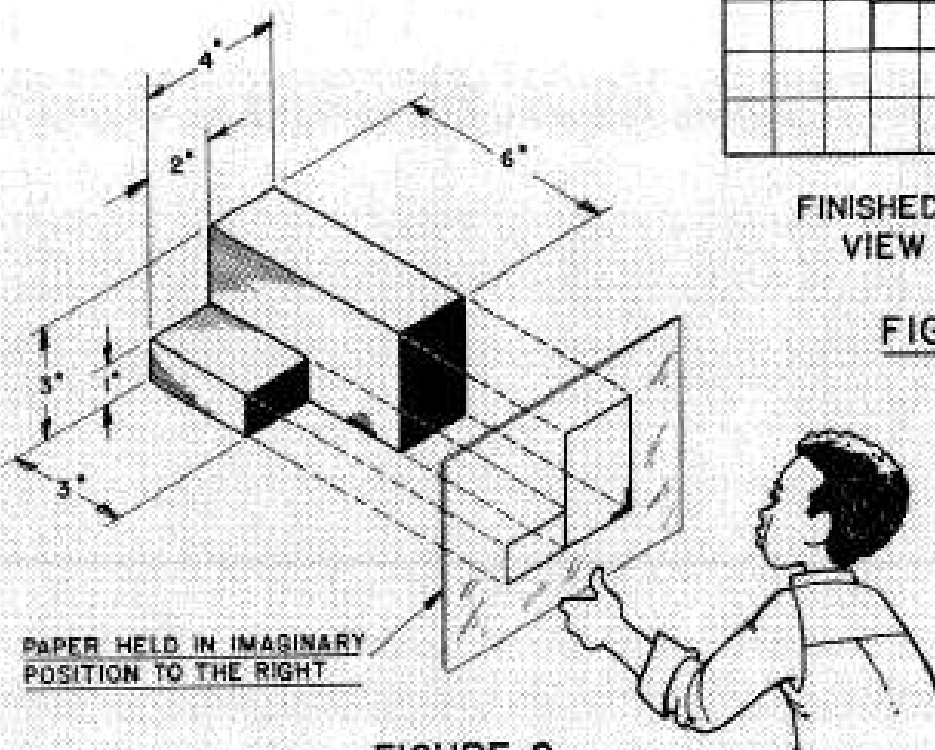
## HOW TO DRAW A RIGHT SIDE VIEW

### Information

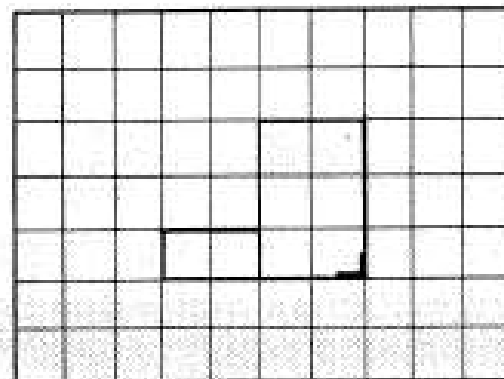
To draw a **RIGHT SIDE VIEW** of an object, first imagine you are holding your paper to the right of the object and looking at it as shown in Figure 2. If you do this you will only be able to see the solid blue surfaces of the object. Drawing the outlines of these surfaces only, exactly as they look, is called drawing a **RIGHT SIDE VIEW**. Figure 1 shows how the **RIGHT SIDE VIEW** drawing of the object shown in Figure 2 will appear when finished.

### Assignment

On the following pages (19, 20, 21, and 22) are pictorial drawings of eight different objects. A person is shown holding a sheet of paper at the right of each object. On the paper is a drawing of the surfaces as the person sees them. You are to draw a finished **RIGHT SIDE VIEW** of each object in each squared section, in the same manner as shown in Figure 1. Start each drawing at the "heavy corner" given in each squared section and corresponding to the heavy corner in the drawing on the paper being held by the person in each picture. Allow 1 square to equal one inch.



**FIGURE 2**



**FINISHED RIGHT SIDE  
VIEW DRAWING**

**FIGURE 1**

## HOW TO USE HIDDEN LINES

### Information

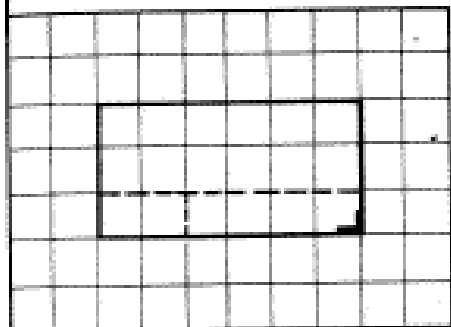
An edge or corner which cannot be seen when drawing a *top*, *front*, or *right side view* is represented by what is known as a "hidden" line. A hidden line is a series of small dashes as shown in the *front view* drawing. (See Figure 1.)

The person in Figure 2 is drawing a *front view* of an object which has edges which cannot be seen. These edges are represented by hidden lines as shown in the finished *front view* drawing in Figure 1.

### Assignment

On the following pages (24, 25, 26, and 27) are pictorial drawings of eight different objects. A person is pictured holding a sheet of paper above, in front, or to the right of each object. On the paper is a drawing of the object showing the hidden lines which the finished drawing would contain.

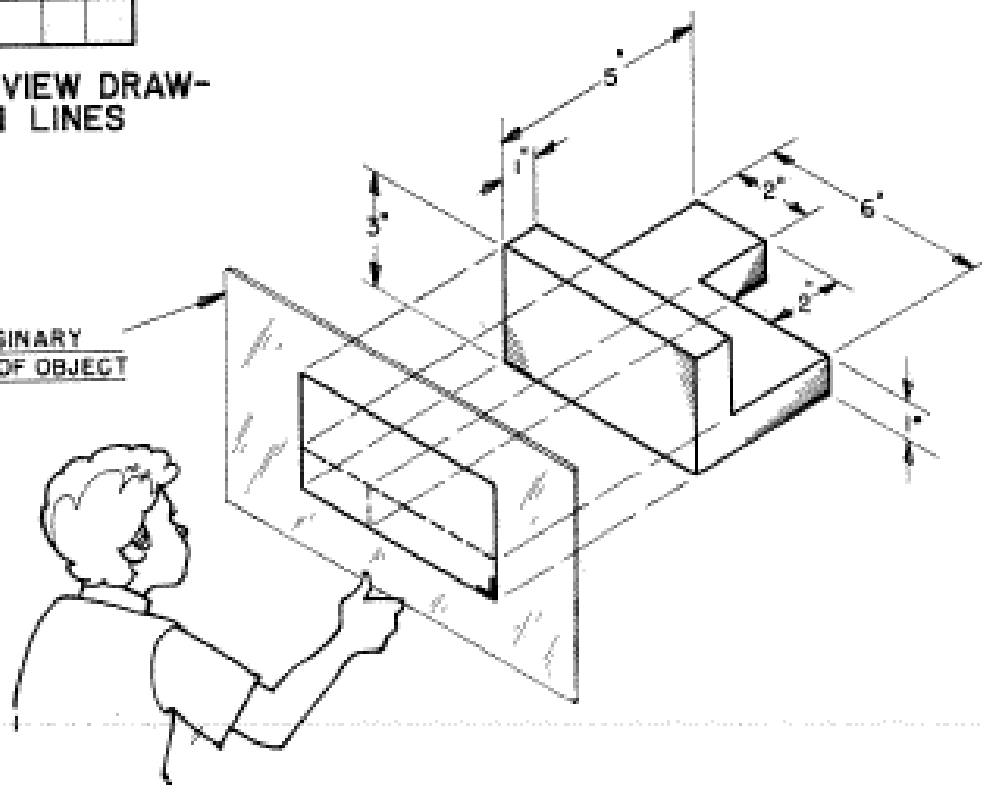
You are to draw the view asked for in the squared section given with each problem. Include all hidden lines. Start each drawing at the "heavy corner" given in each squared section and corresponding to the heavy corner shown on the paper the person is holding. Allow one square to equal one inch.



**FIGURE 1**

### FINISHED FRONT VIEW DRAWING WITH HIDDEN LINES

PAPER HELD IN IMAGINARY POSITION IN FRONT OF OBJECT



**FIGURE 2**

# HOW TO MAKE A THREE-VIEW MECHANICAL DRAWING

## Information

You have now learned how to draw TOP, FRONT, and RIGHT SIDE VIEWS of an object. To make a three-view mechanical drawing you must learn how to place these views on your paper in the correct relation to each other. To help you understand how to do this, the *orthographic projection paper* shown in Figure 1 is used.

## How to Use Orthographic Projection Paper

1. Draw the front view of the object pictured in Figure 2 in the *front view* area of the paper (See A, Figure 1.) Note that the "heavy corner" shown in the front of the pictured object is the same as the heavy corner on the paper.
2. Draw the top view of the object pictured in Figure 2 in the *top view* area of the paper. (See B, Figure 1.) Note that the heavy corner shown on the top of the pictured object is the same as the heavy corner on the paper.

3. Draw the right side view of the object pictured in Figure 2 in the *right side view* area of the paper. (See C, Figure 1.) Note that this view is located by following the circular lines from the *top view* and the horizontal lines from *front view*.
4. Check placement of views as follows:
  - a. Remove the orthographic projection paper from book.
  - b. Cut or tear out the corner. (See D, Figure 3.)
  - c. Fold into the shape of a box and examine. (Figure 4.)

## Assignment

Following are pictures of eighteen different objects. You are to make a *three-view mechanical drawing* of each using the *orthographic projection paper* provided. Allow one square on the orthographic projection paper to equal  $\frac{1}{4}$  of an inch. Proceed with the drawing of each object as described above.

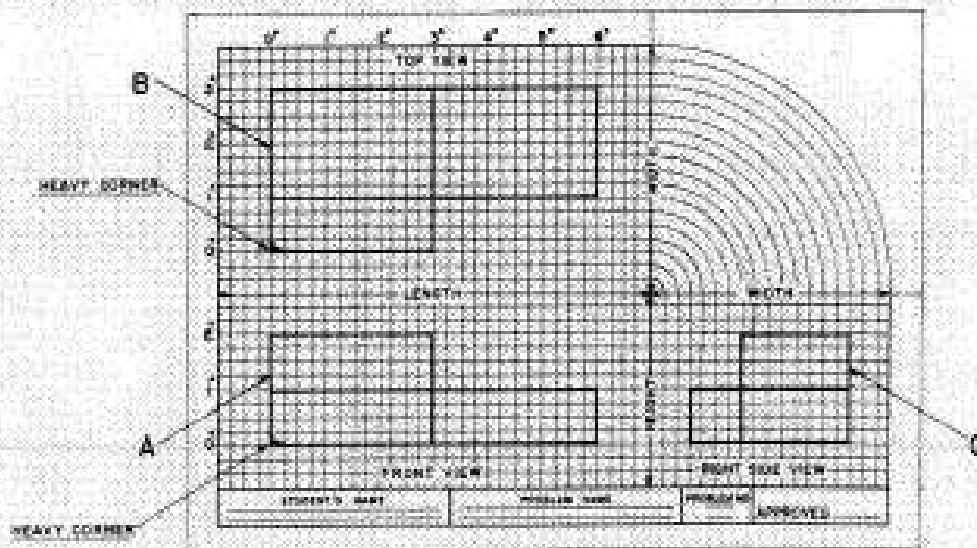


FIGURE 1

