Assignment – Chapter 2
Orthographic Projection
Questions & Exercises

1. Name the three main projection divisions commonly used in freehand engineering sketches and detailed engineering drawings: Axonometric, Oblique and Perspective

2. Name the projection divisions within Axonometric projection: Isometric, Dimetric, and Trimetric.

3. True or False: In oblique projections the front view is drawn true size, and the receding surfaces are drawn on an angle to give it a pictorial appearance.

4. Name the two types of Oblique projection used in engineering design: Cavalier, Cabinet.

5. Describe Perspective Projection. Provide an example. It shows objects as the eye can see them Example, railroad tracks converge at the horizon

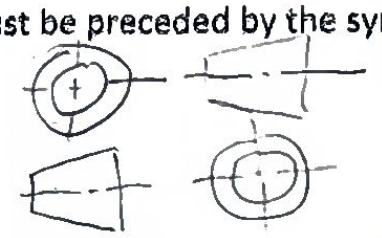
6. True or False: Parts that are uniform in shape often require only one view to describe them adequately.

7. True or False: The designer usually selects as a Front view of the object that view which best describes the general shape of the part. This Front view may have no relationship to the actual front position of the part as it fits into an assembly.

8. True or False: When a one-view drawing of a cylindrical part is used, the dimension for the diameter (according to ANSI standards) must be preceded by the symbol Ø.

9. Draw a Third Angle Projection Symbol.

10. Draw a First Angle Projection Symbol.



11. Describe the difference between First and Third Angle Projection. First Angle, object is between observer and projection plane. Third angle, projection plane is between observer and plane.

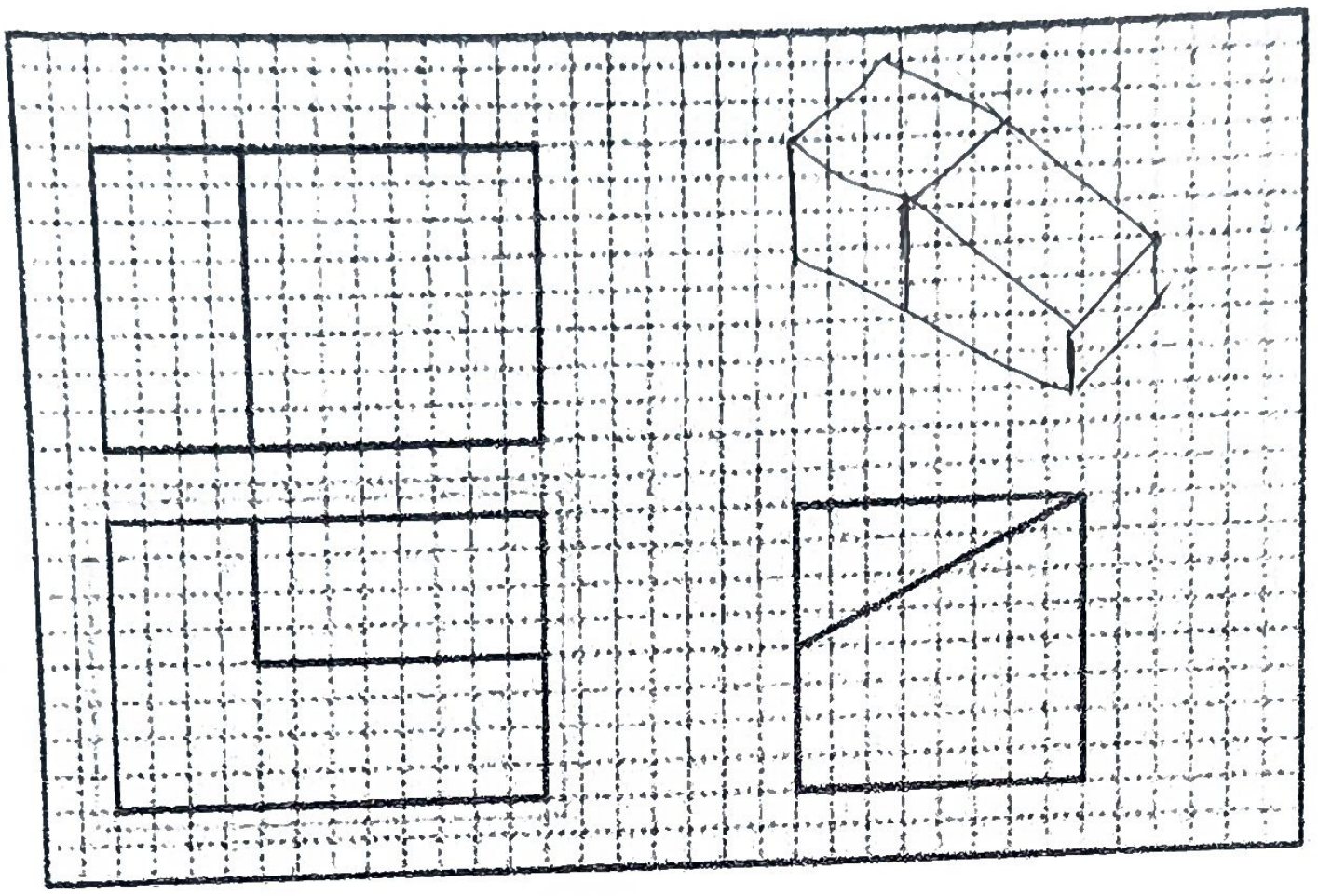
12. True or False. First Angle Projection is used in the United States.

13. True or False. Section lines can serve the purpose of identifying the kind of material the part is made from.

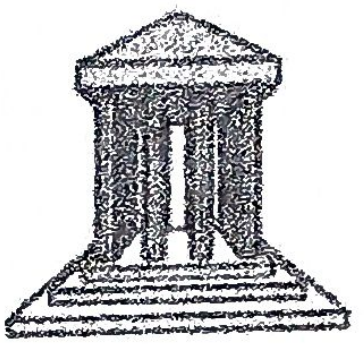
14. True or False. All dimension lines terminate with an arrowhead on mechanical engineering drawings.

15. True or False. Break lines are applied to represent an imaginary cut in an object, so the interior of the object can be viewed.

Hand draw the Isometric view from the illustrated model below.



Identify the number of vanishing points for each picture.



1. Number of vanishing points for the first picture. one

2. Number of vanishing points for the second picture. two

3. Number of vanishing points for the third picture. one

Hand draw the Isometric view for one of these objects. Approximate the size of the model.