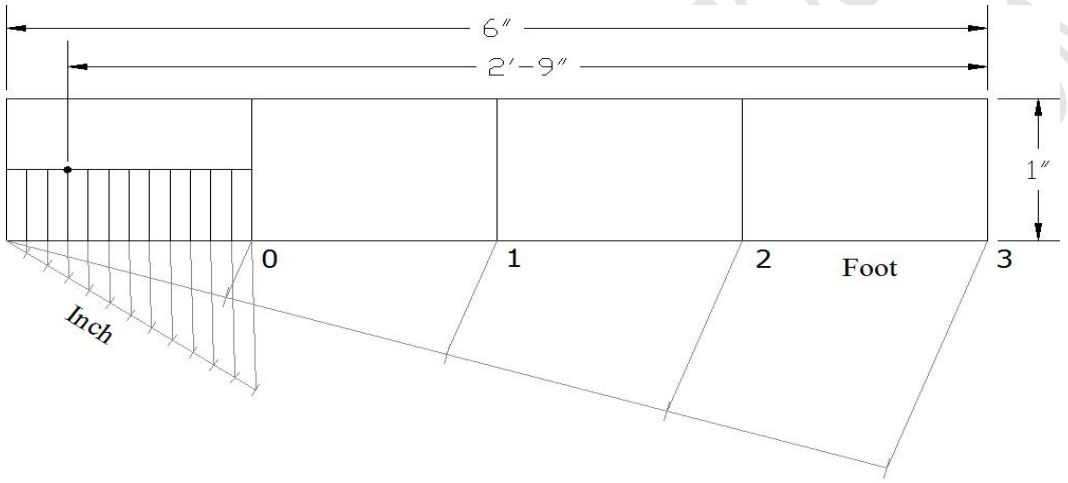
Engineering Drawing-Assignment/Paper Code [ME- 208]

ASSIGNMENT-3
CONSTRUCTION OF SCALE

Problem : 01.

Draw a plain scale of RF 1/8 or $1\frac{1}{2}$" $\equiv$ 1', show feet and inch and indicate a length of 2'-9". The length of the scale will be 4'.

Solution :RF= 1/8, ∴ Length of scale = $\frac{1}{8}$ x 4' = (1/8 x 4 x 12) inch = 6"

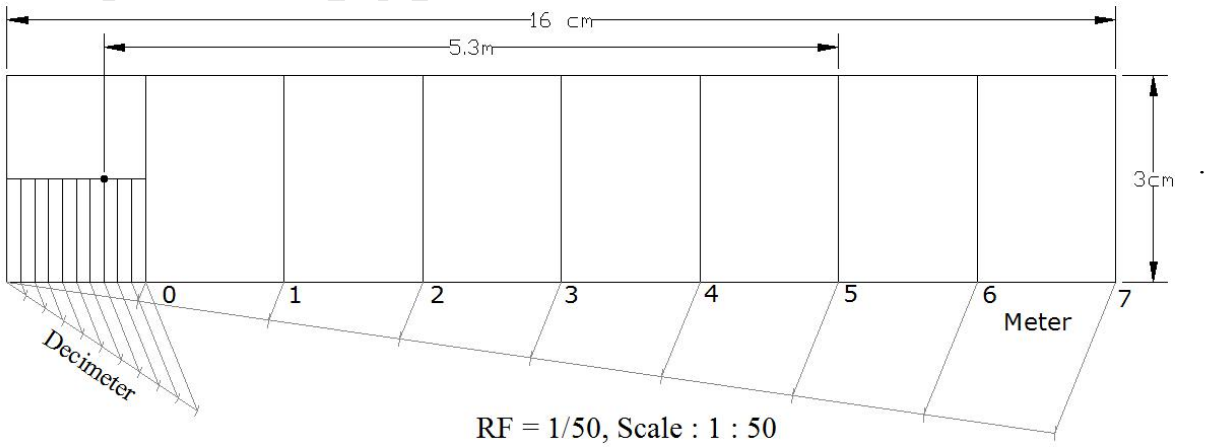


RF = $\frac{1}{8}$

Problem : 02.

Draw a plain scale of 1 : 50 to show meters and decimeters and long enough to measure 8 m. Show on it a distance equal to 5.3 m.

Solution : RF= 1/50, ∴ Length of scale = (1/50 x 8 x 100) cm = 16cm = 160mm



RF = 1/50, Scale : 1 : 50

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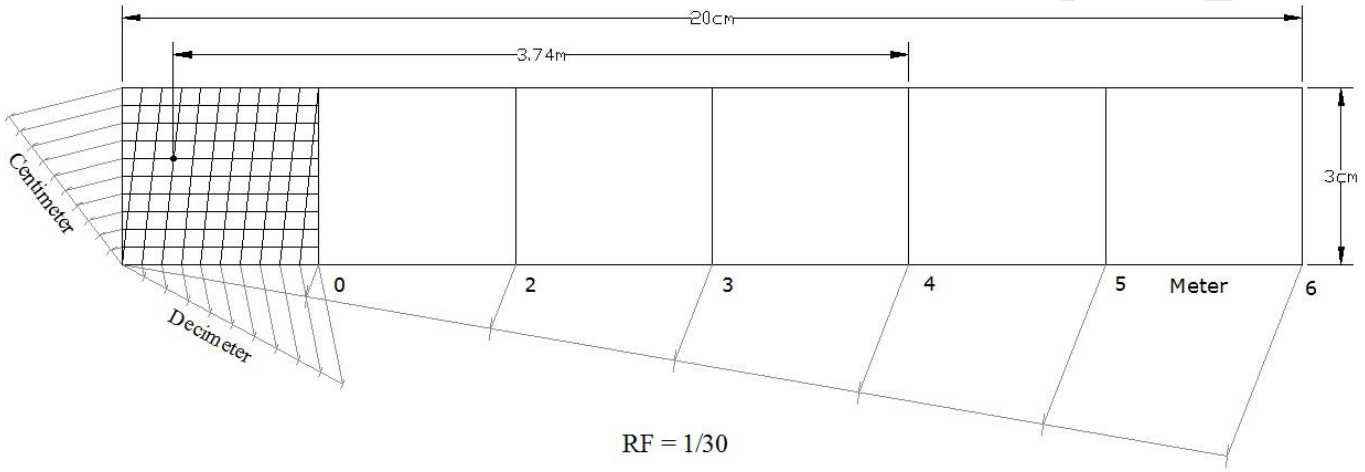
Problem : 03.

Draw a diagonal scale of 1 : 30, showing m-dcm-cm and long enough to measure upto 6 m, indicate a length of 3.74m on scale.

Solution : RF= 1/30, ∴ Length of scale = (1/30 x 6 x 100) cm = 20cm = 200mm

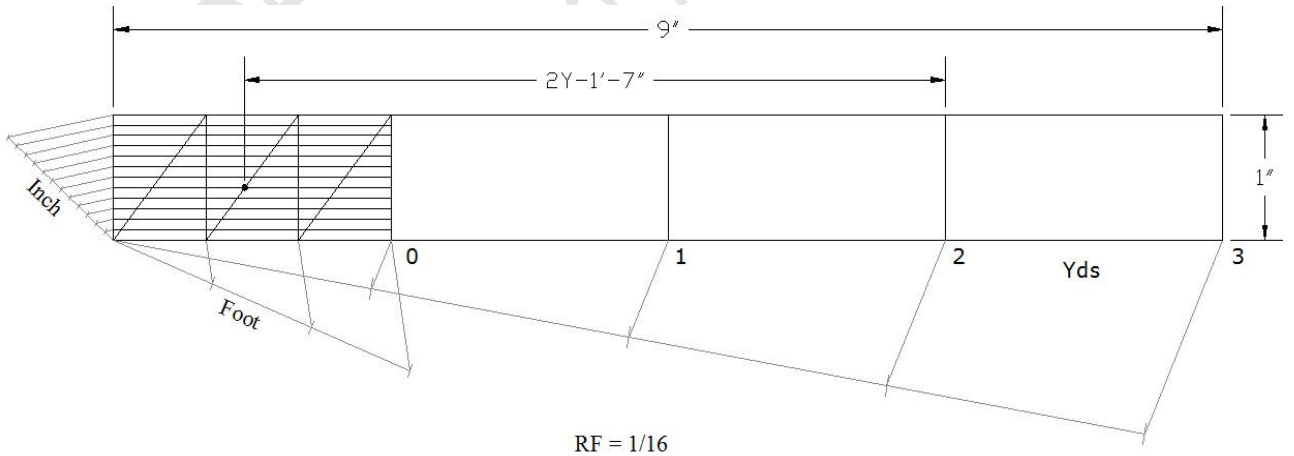


RF = 1/30

Problem : 4

Construct a diagonal scale of RF = 1 : 16, showing yards-ft-in and measure upto 4yards, indicate a length of 2yards-1ft-7in. on scale.

Solution : RF= 1/16, ∴ Length of scale = (1/16 x 4 x 3 x 12) inch = 9 inch



RF = 1/16

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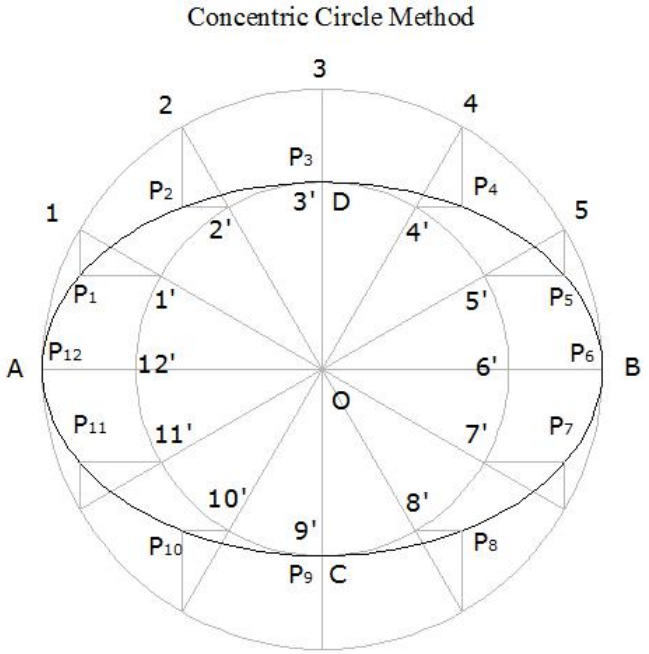
ASSIGNMENT-4
Engineering Curves

Problem:1

Draw an ellipse of having major axis AB-120 mm and minor axis CD=80 mm by Concentric Circle method.

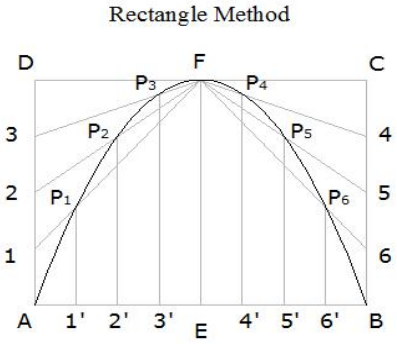


ELLIPSE

AB = MAJOR AXIS = 120mm
CD = MINOR AXIS = 80mm

Problem:2

Draw a Parabola with it's base is AB=80 mm and Axis EF=60 mm by Rectangle method.



PARABOLA

AB = BASE = 80mm
EF = AXIS = 60mm

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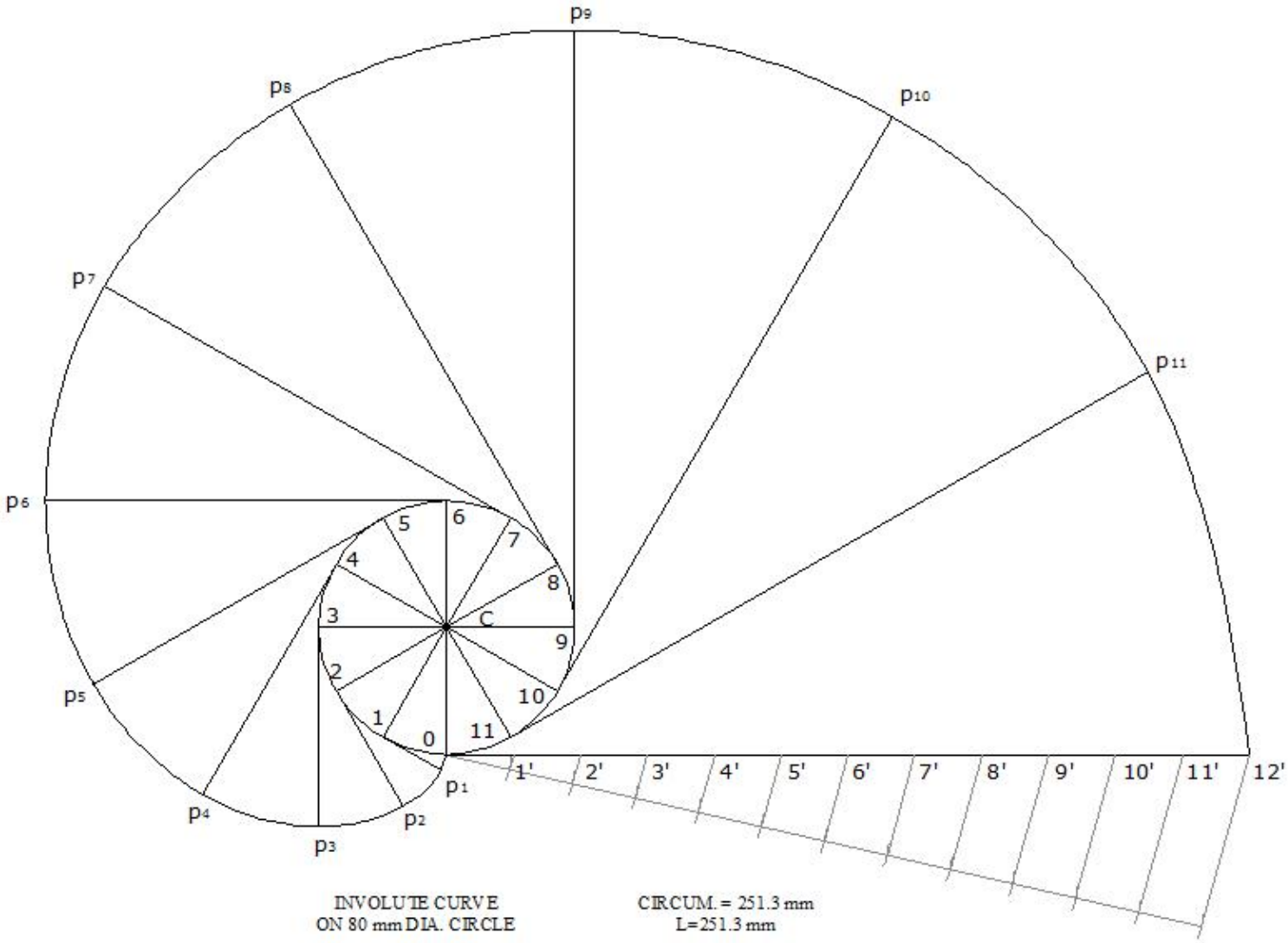
Problem-3

Draw an involute curve of a circle having diameter is 80 mm.



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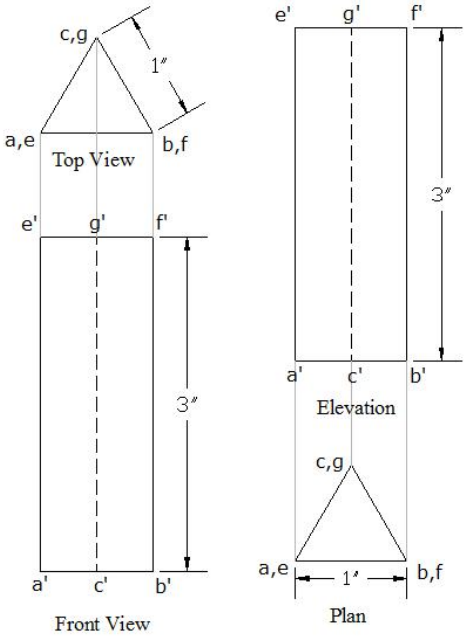
ASSIGNMENT-5
ORTHOGRAPHIC PROJECTION OF SOLIDS

Problem:1

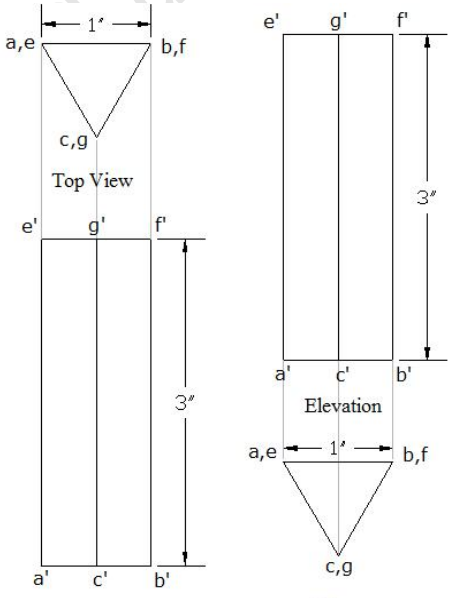
Draw in both first angle and third angle projection plan ,elevation and top view, front view of a triangular prism with axis vertical and one of the triangular faces is parallel to the vertical plane. It's height is 3 inch and each sides of triangular face is 1 inch. Use 1:1 scale.



THIRD ANGLE PROJECTION
Scale: 2:1

FIRST ANGLE PROJECTION
Scale: 2:1

OR



THIRD ANGLE PROJECTION
Scale: 2:1

FIRST ANGLE PROJECTION
Scale: 2:1

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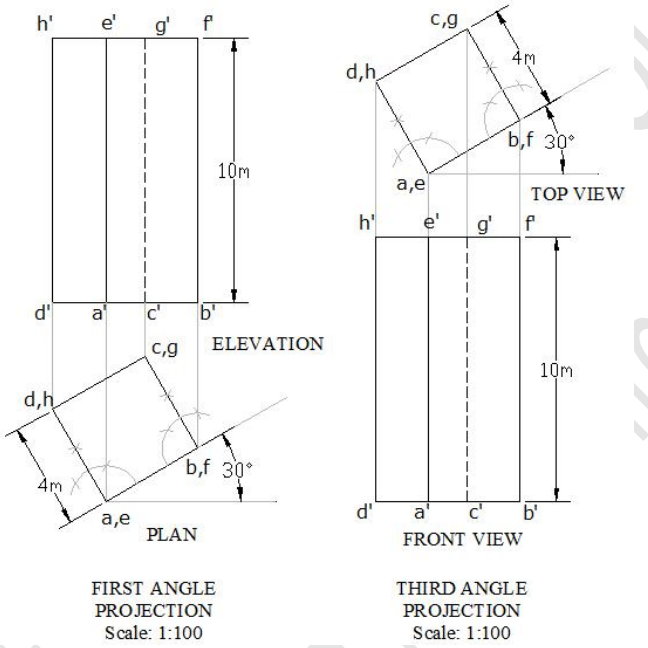
Problem:2

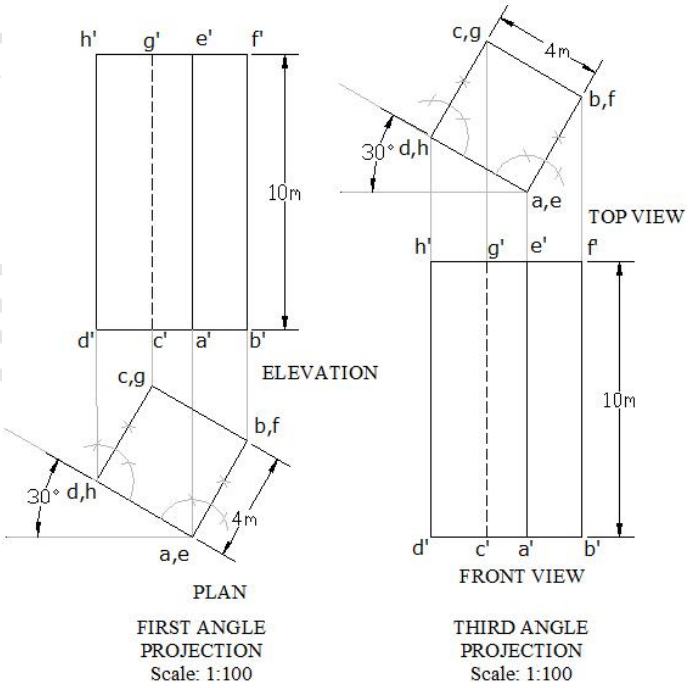
A square prism of length 10 m and each sides of square 4 m is placed with axis vertical , and one of the sides of the square is at an angle 30 ° with vertical plane. Draw plan , elevation and top view and front view in both first angle and third angle projection. Use 1:100 Scale.



FIRST ANGLE PROJECTION
Scale: 1:100

THIRD ANGLE PROJECTION
Scale: 1:100

OR



FIRST ANGLE PROJECTION
Scale: 1:100

THIRD ANGLE PROJECTION
Scale: 1:100

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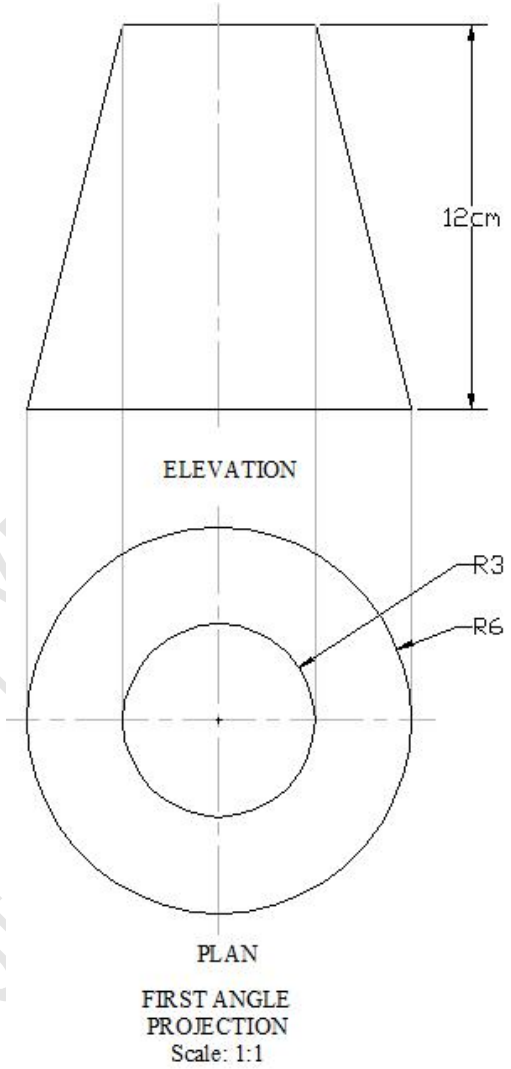
Problem:3

Draw first angle projection plan and elevation of a truncated cone with it's axis vertical . It has top circle diameter 3 cm and base circle diameter 6 cm and of length of 8 cm. Use 1:1 Scale.



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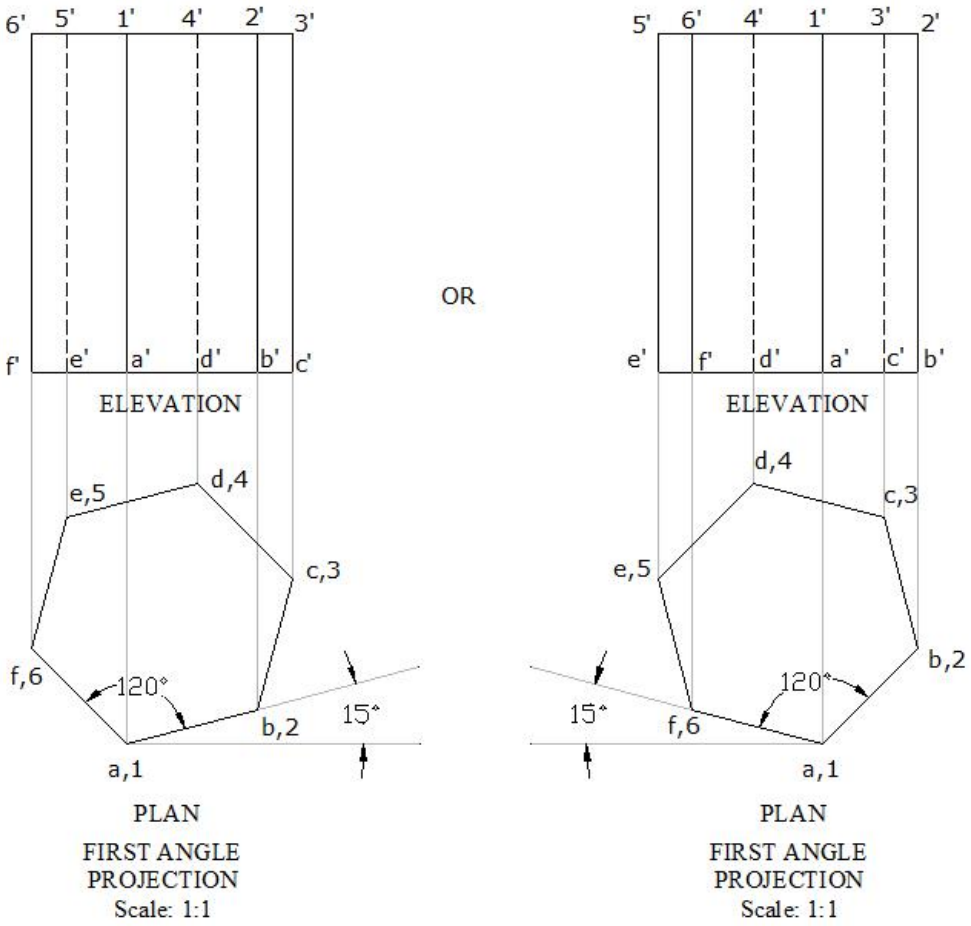
Problem:4

Draw first angle projection plan and elevation of a hexagonal prism with axis vertical and one of the rectangular faces is at an angle 15° with vertical plane . Each side of the hexagon is 4 cm and of height of 10 cm . Use 1:1 Scale.



FIRST ANGLE PROJECTION
Scale: 1:1

FIRST ANGLE PROJECTION
Scale: 1:1

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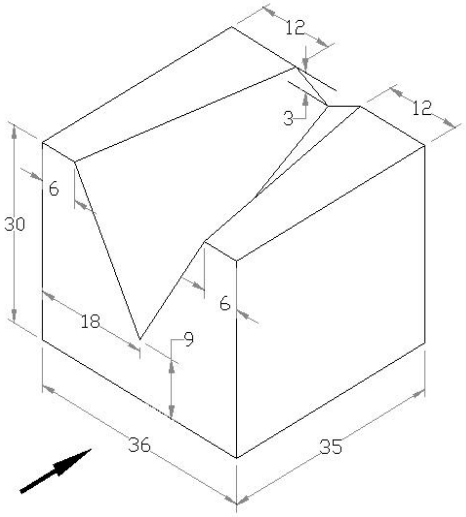
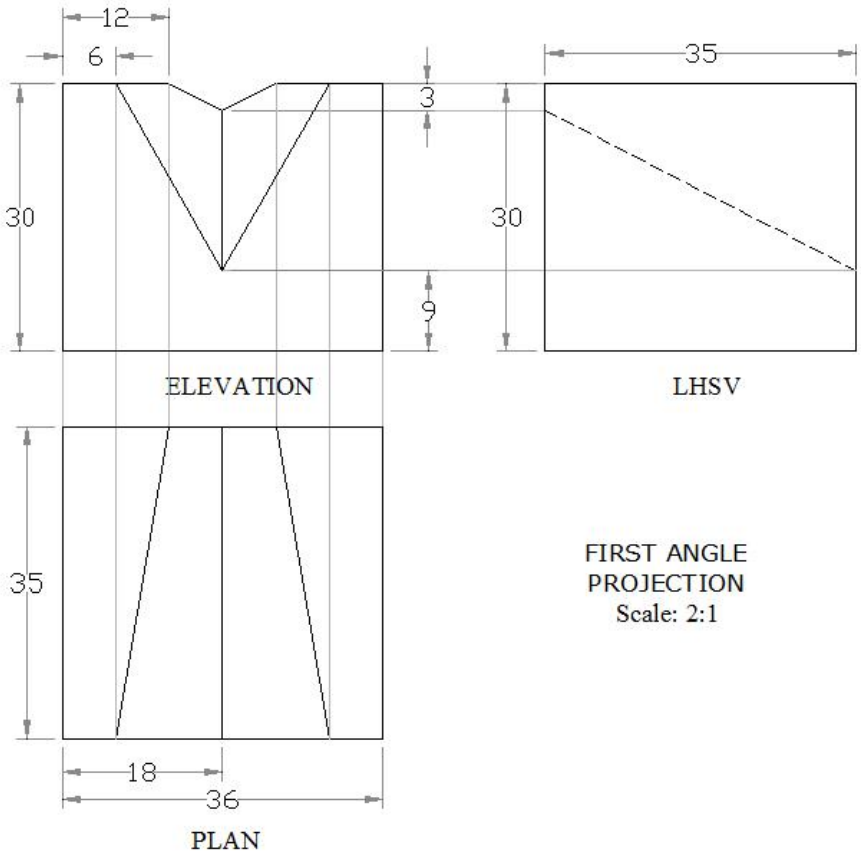
ASSIGNMENT-6
Visualization Concept to develop different views from a solid

Problem:1

Draw Plan , elevation and side views of a V- block as shown in the figure below using first angle projection.Use 1:1 scale.



Solution



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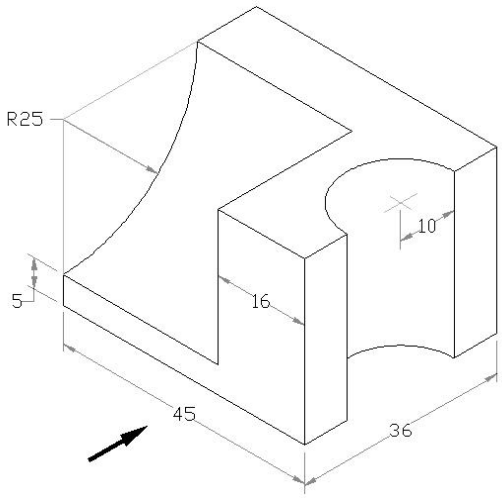
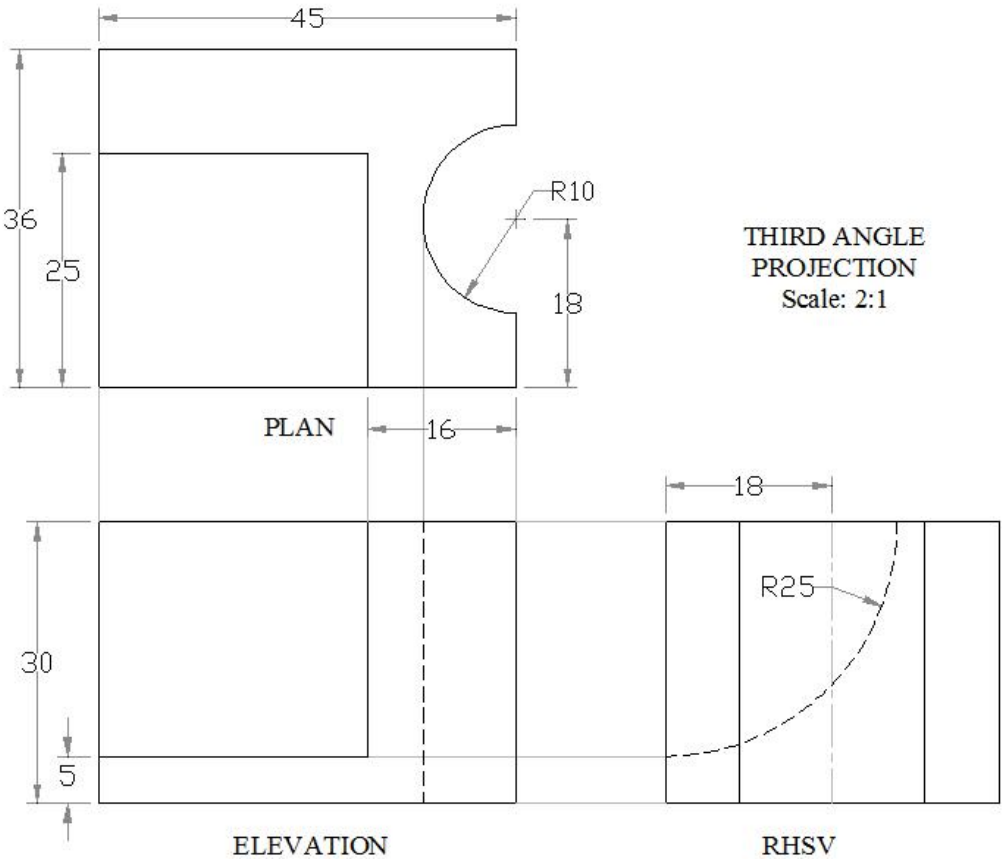
Problem:2

Draw top view , front view and side view of the solid as shown in figure below considering third angle projection and use 2:1 Scale.



Solution :Solution to problem 2 is as follows.



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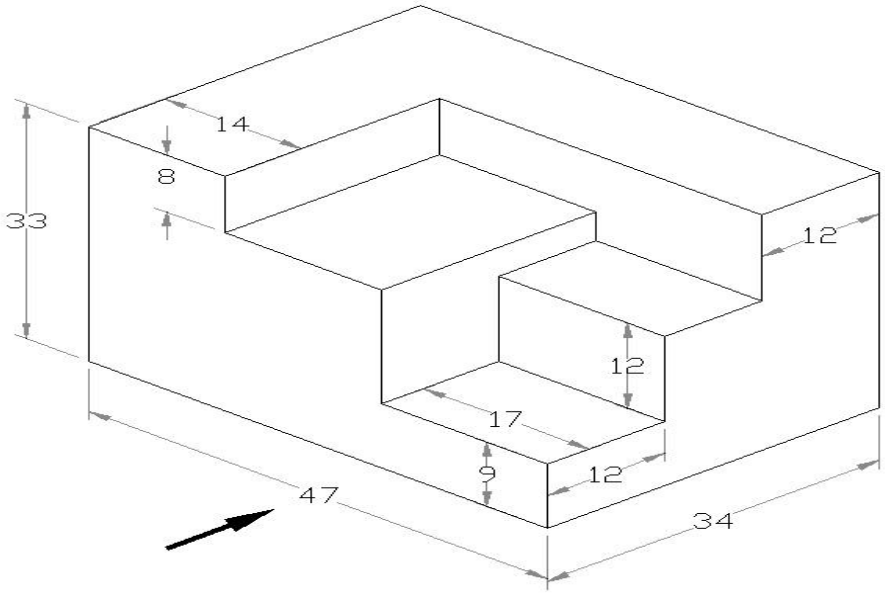
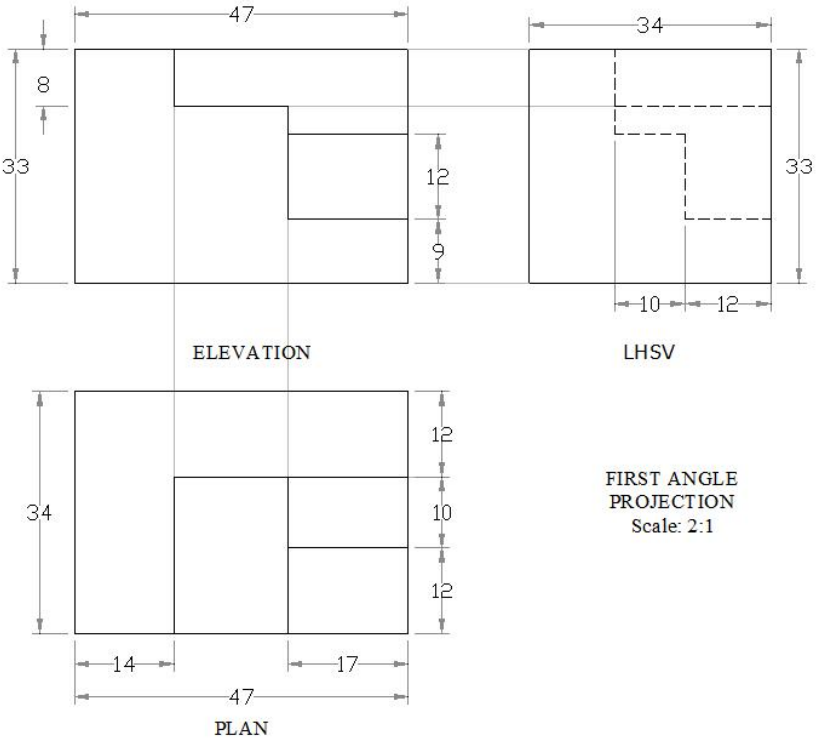
Problem:3

Draw the first angle projection of the stair case as shown in figure below . Use 2:1 Scale.



Solution: Solution of the problem 3 as follows.



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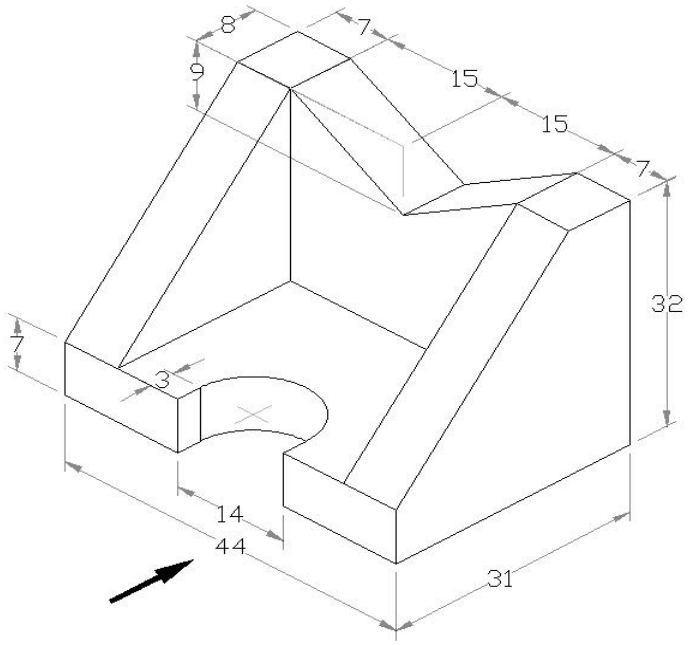
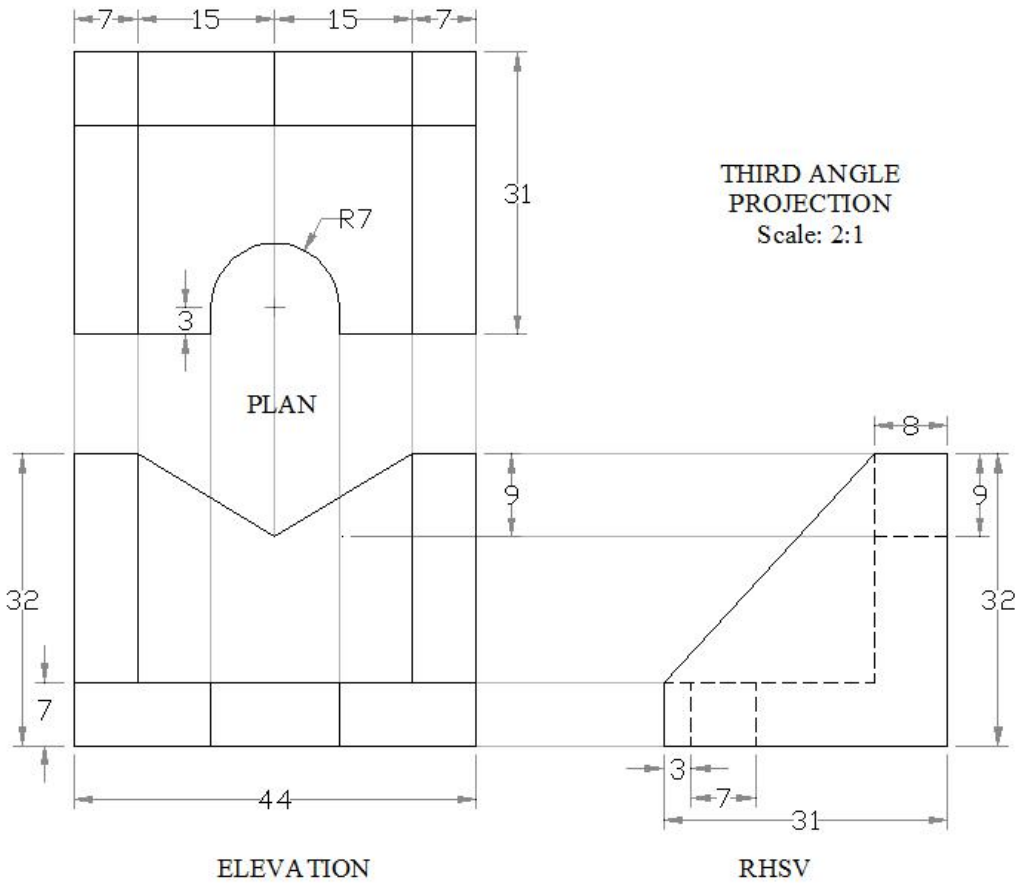
Problem:4

Draw the top view , front view and side view of solid as shown in figure below considering third angle projection and using 2:1 Scale.



Solution :Solution of problem 4 as follows.



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