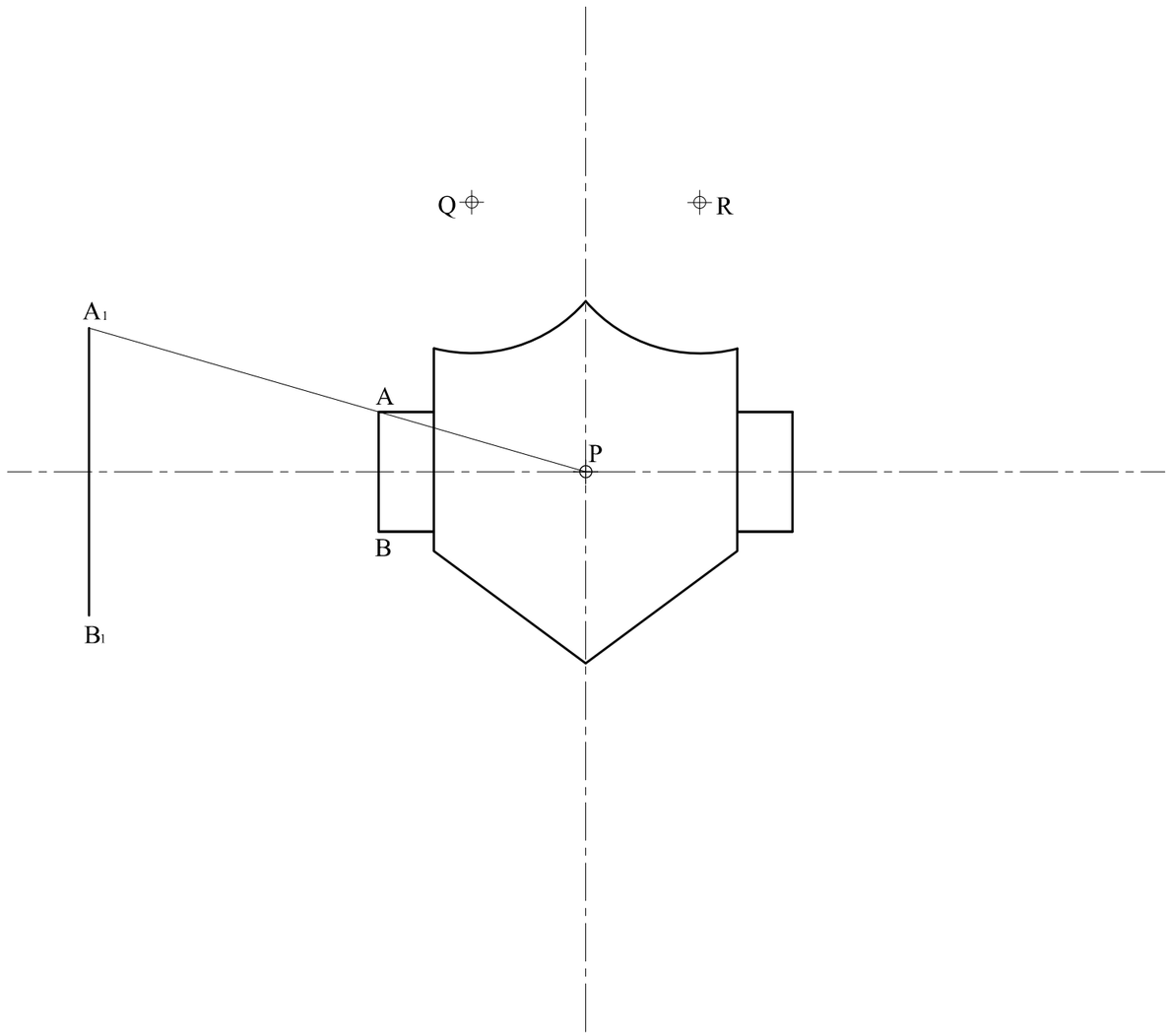
Question 1. A drawing of a motor bike logo is shown below. By means of geometrical construction, line AB has been enlarged to A_1B_1.
Complete the construction to enlarge the whole drawing using centre P as the pole.
Notes:

a. The centres of the two arcs are marked Q and R.
b. Construct the left-hand side of the logo and mirror copy (reflect) the right-hand side.

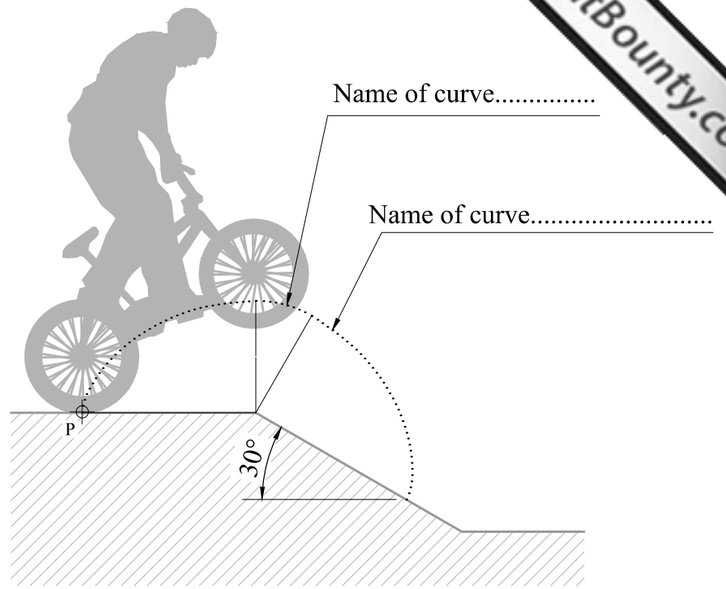
(10 marks)

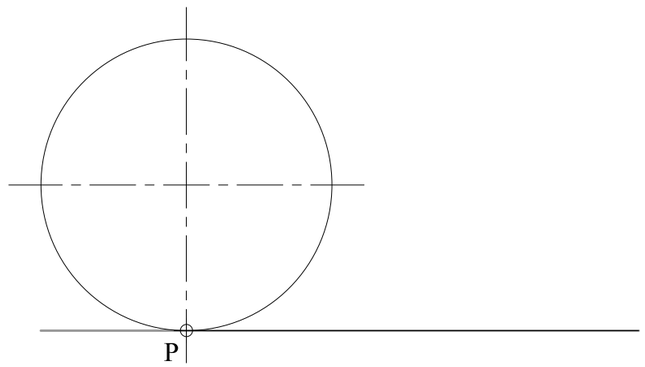


Question 2. The profile of a cyclist on a motocross bike is given on the right. Starting from the given position, the rear wheel is to turn forward for half a revolution on a horizontal platform and continue another half revolution down the slope without slipping. Using the given start lines below:

a. Trace the locus of point P.
b. State the name of the curves traced (in the spaces provided).

(14 marks)





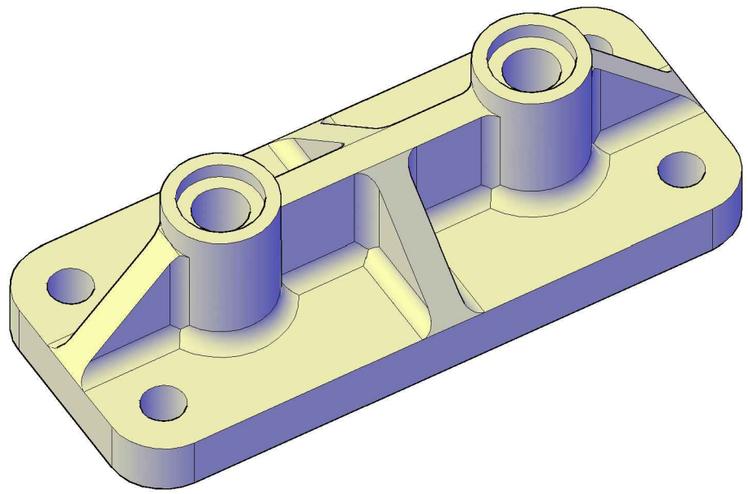
Class:

Question 3. A pictorial view, an end view, a plan view and an incomplete front view of a cast iron **Base Plate** are given.

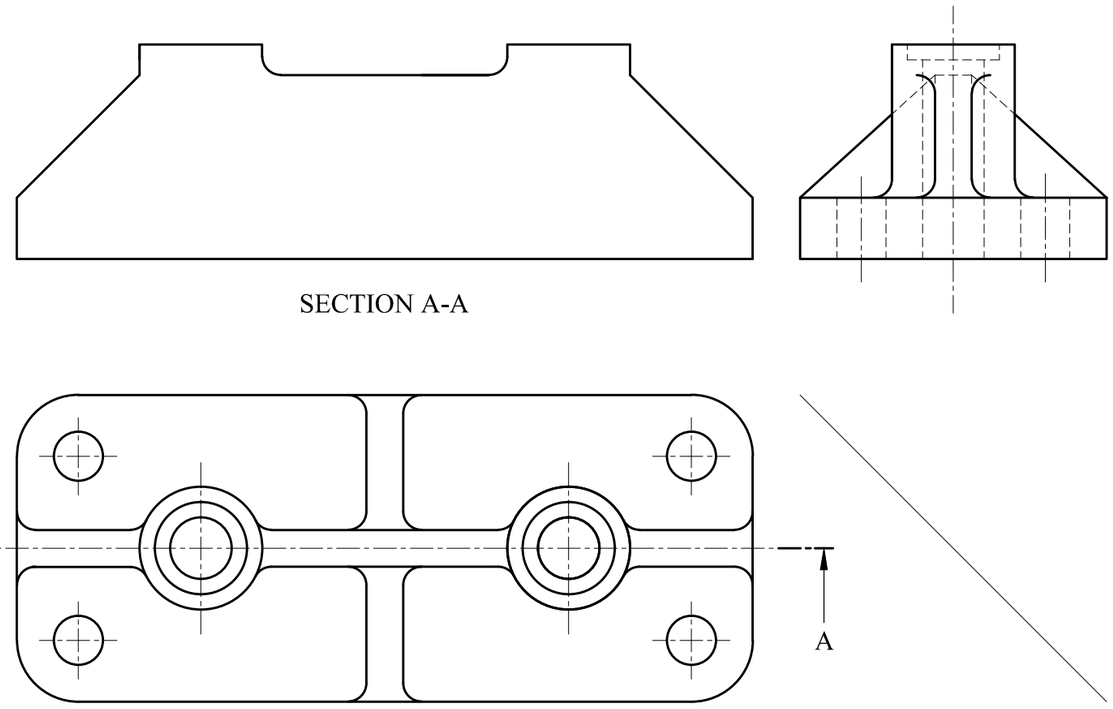
a. Complete the sectional front A-A.

b. Draw the symbol of the projection used.

(15 marks)



Projection Symbol

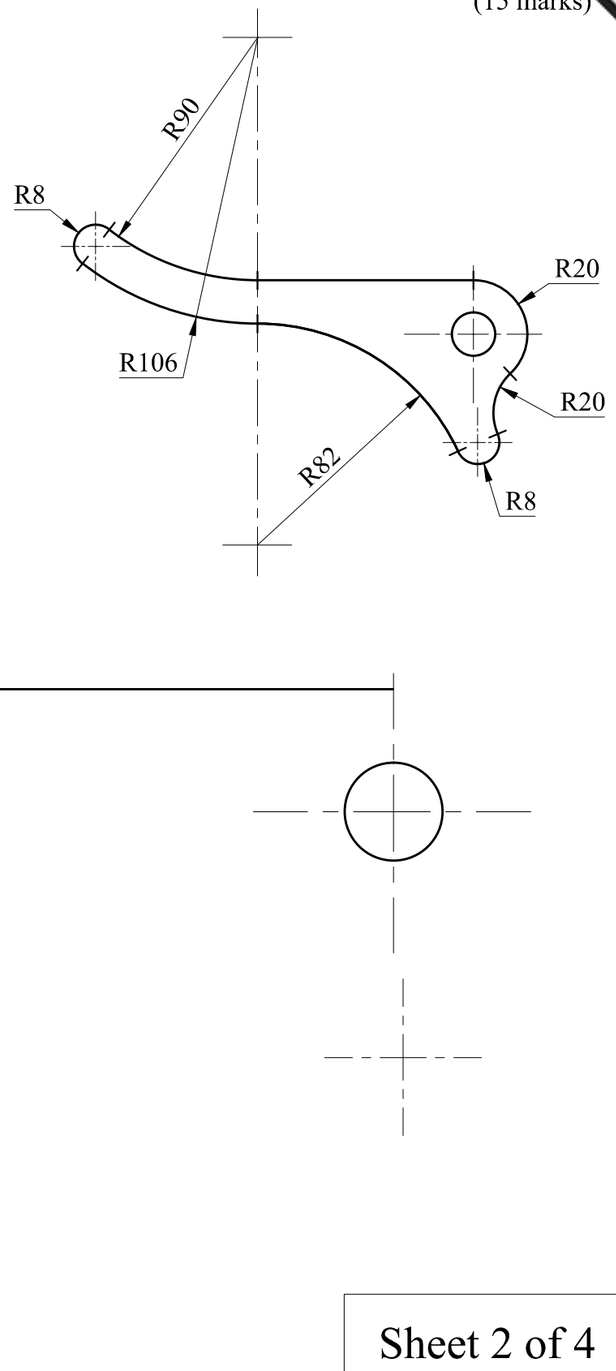


Question 4. A dimensioned profile of a bicycle brake handle is shown on the right. Using [illegible] given below, construct the outline of the handle. Leave all constructions necessary to loc[illegible] and points of tangencies visible.

Note:

All points of tangencies are denoted by short dashes.

(15 marks)



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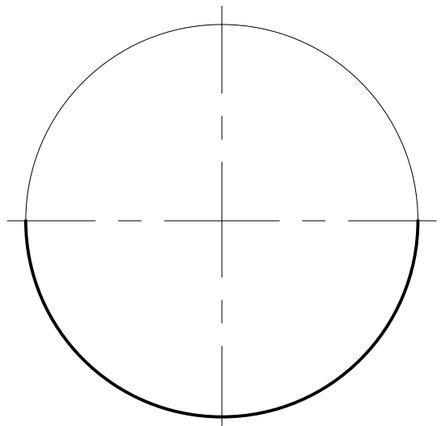
GRAPHICAL COMMUNICATI[illegible]

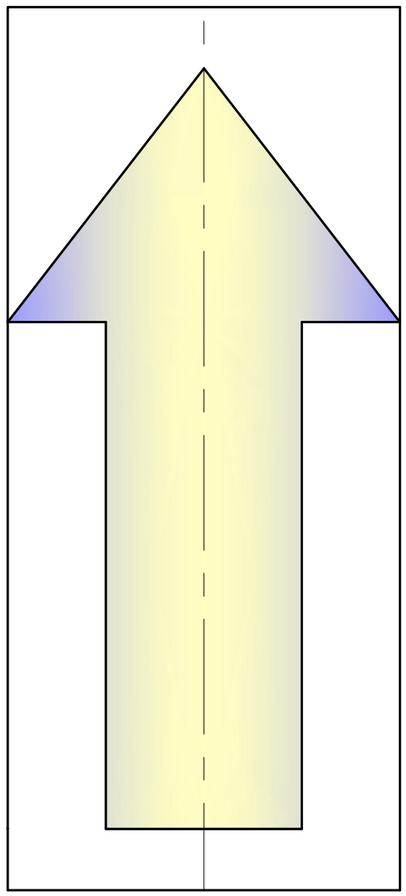
Class:

Question 5. The pictorial view given shows an arrow-shaped badge which is fitted on the head tube of a bicycle. The widest part of the badge covers half the circumference of the tube.
Using the front elevation and plan given below, construct the surface development of the arrow.

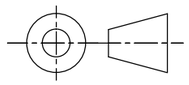
(12 marks)

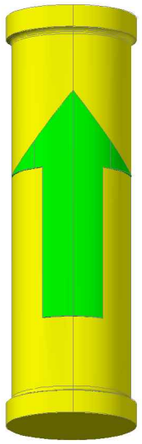


PLAN



FRONT ELEVATION

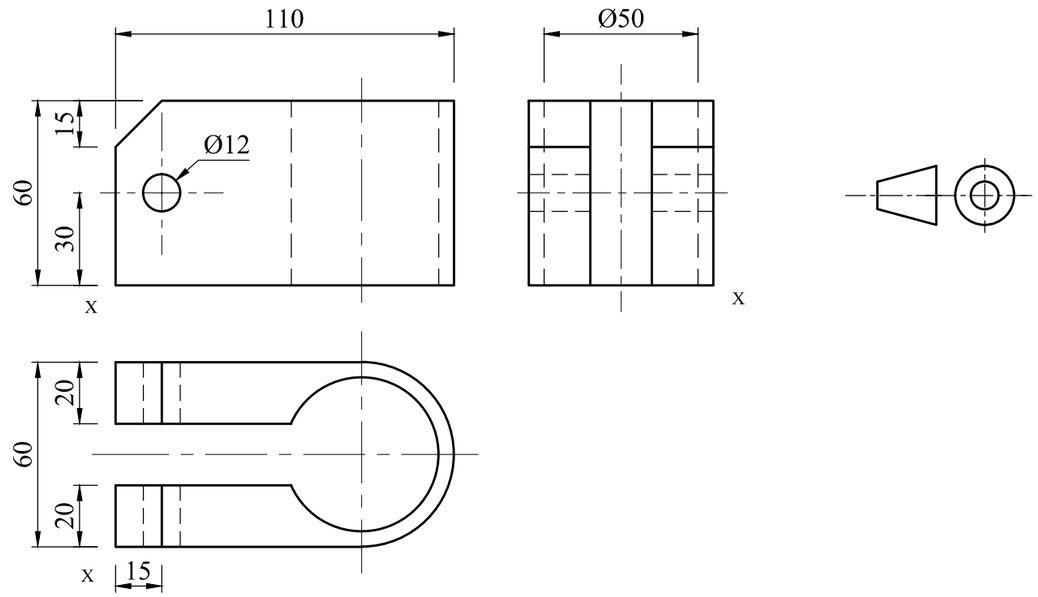


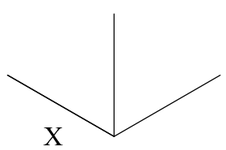


SURFACE DEVELOPMENT OF ARROW

Question 6. Three dimensioned orthographic views of a bike seat clamp are given. In the ...ided below and on the given start lines, project a full size isometric view placing corner X in th... ...ct position.

(16 marks)



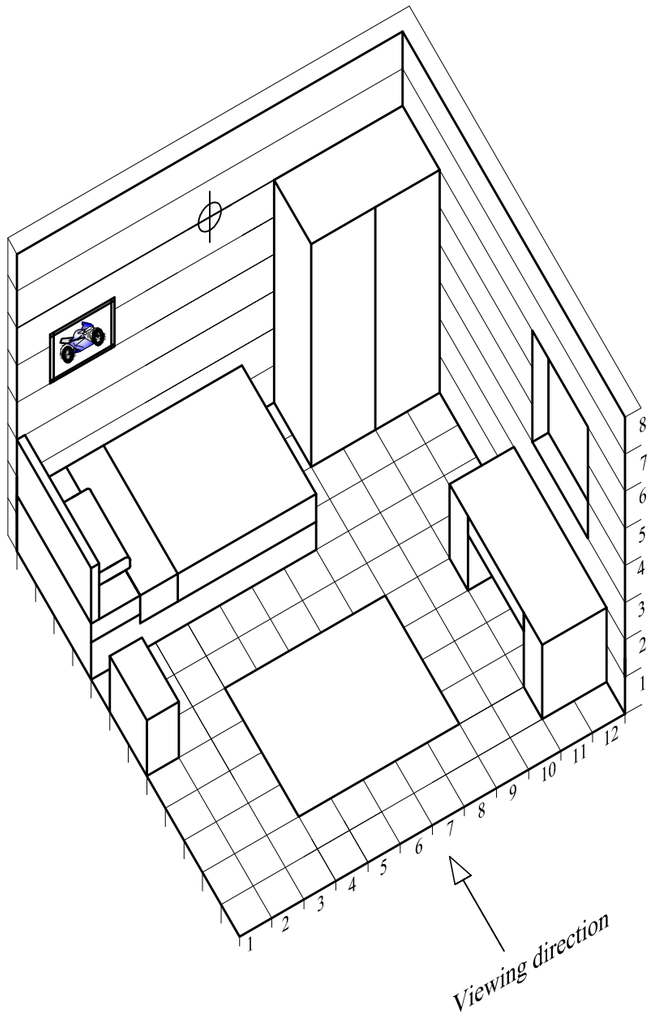


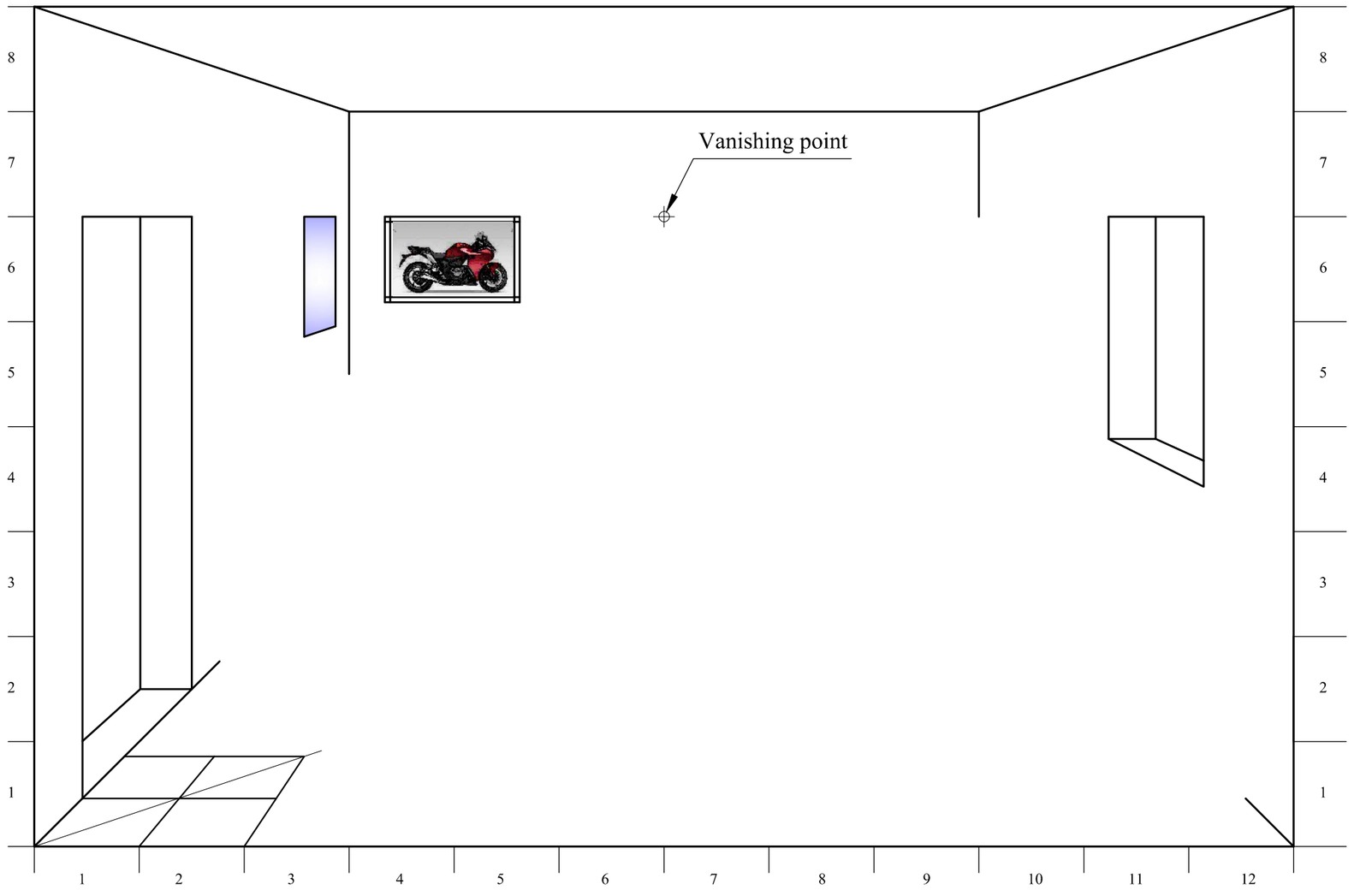
Class:

Question 7. A complete planometric view of a student's room is given below. The length, width and height of the room is 12 units X 12 units X 8 units. The start lines of a perspective view of the room are also given below. The vanishing point is indicated and the floor tiles and courses are numbered. Complete the **estimated single-point perspective view** by following the given steps:

a. Complete the construction of the floor tiles (12 tiles x 12 tiles).
b. Insert the furniture and the carpet (use the tiles and courses to determine the dimensions).
c. Line in with a bold outline the visible tiles, carpet and furniture.

(18 marks)





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