UNIVERSITY OF ESWATINI
FINAL EXAMINATION PAPER

PROGRAMME: BSC ABE II

COURSE CODE: ABE 203

TITLE OF PAPER: ENGINEERING DRAWING

TIME ALLOWED: TWO (2) HOURS

SPECIAL MATERIAL REQUIRED: DRAWING EQUIPMENT

INSTRUCTIONS: ANSWER QUESTION ONE AND ANY TWO OTHER QUESTIONS.

DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR

QUESTION 1

Choose the appropriate answer in the following statements and drawing:

1 What kind of lines are used to represent phantom line?

1: ----------

2: — - — - — - —

3 : — - - — - - — -

4: — - · — - · — - · — - ·

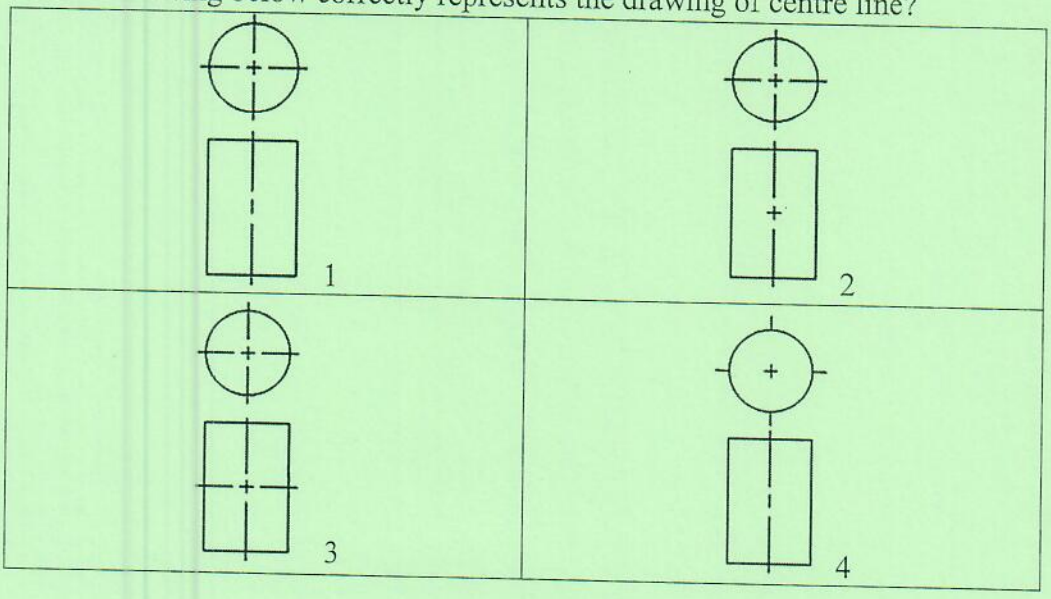
2 Given that paper size A0 is 841 x 1189, determine the size of A3 paper.

1: 210 x 297
2: 297 x 420
3: 420 x 594
4: 594 x 840

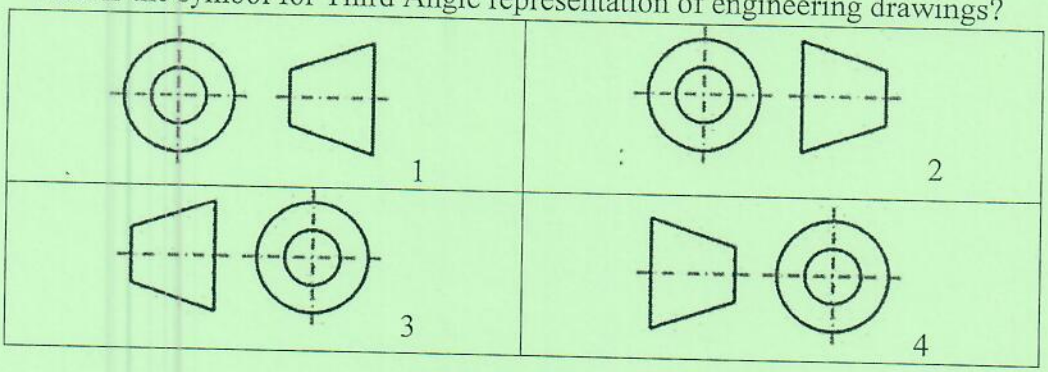
3 A line represents a boundary of a field that measures 50 meters in a drawing. Determine the length of the line if a scale of 1: 5 was used in the drawing.

1: 250 mm
2: 25 mm
3: 10 mm
4: 5 mm

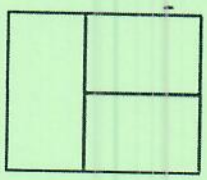
4 Which drawing below correctly represents the drawing of centre line?

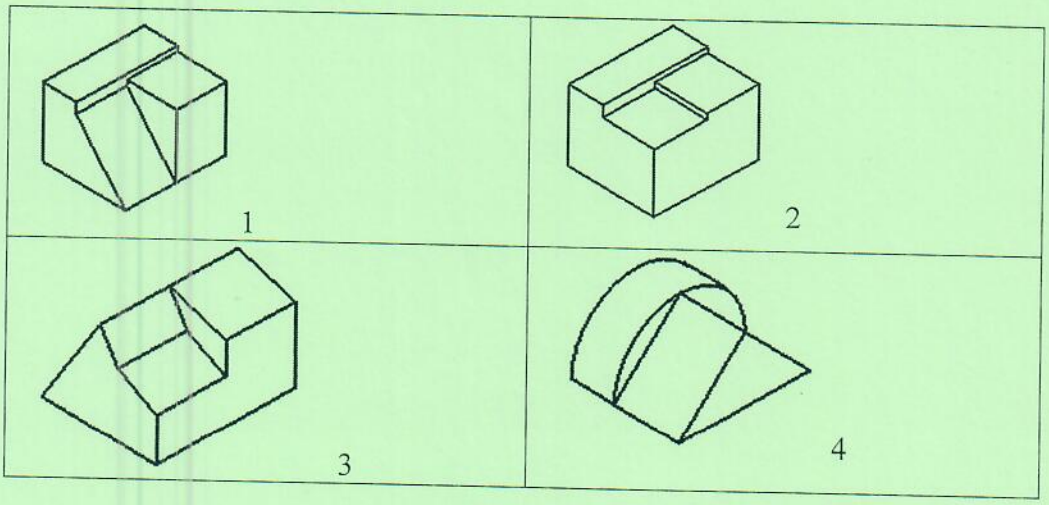


5 What is the symbol for Third Angle representation of engineering drawings?

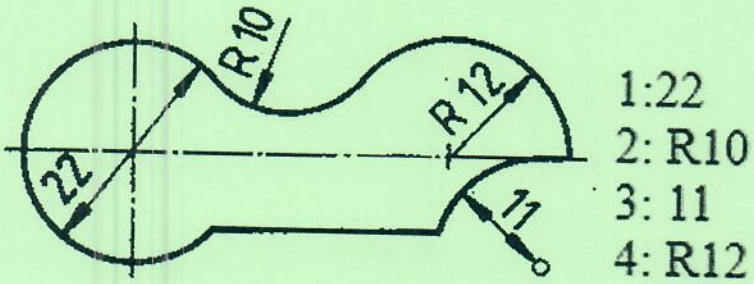


6 Which isometric does not correspond to the top view image?



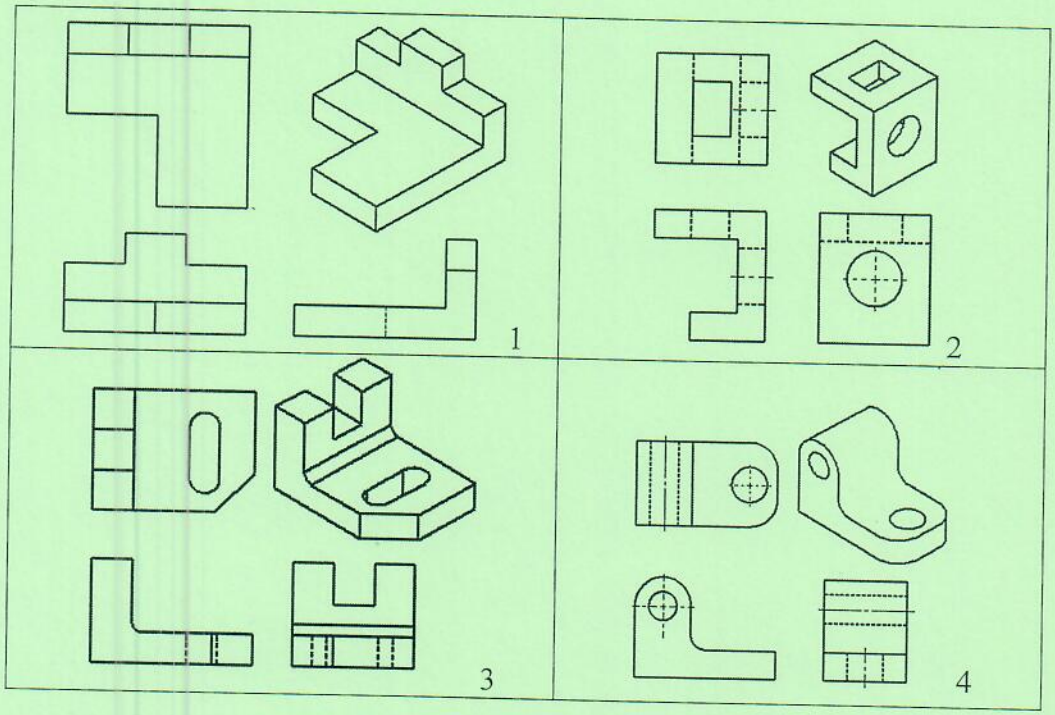


7 What is the wrong size determination?

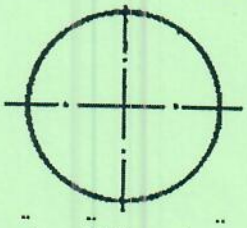


1:22
2: R10
3: 11
4: R12

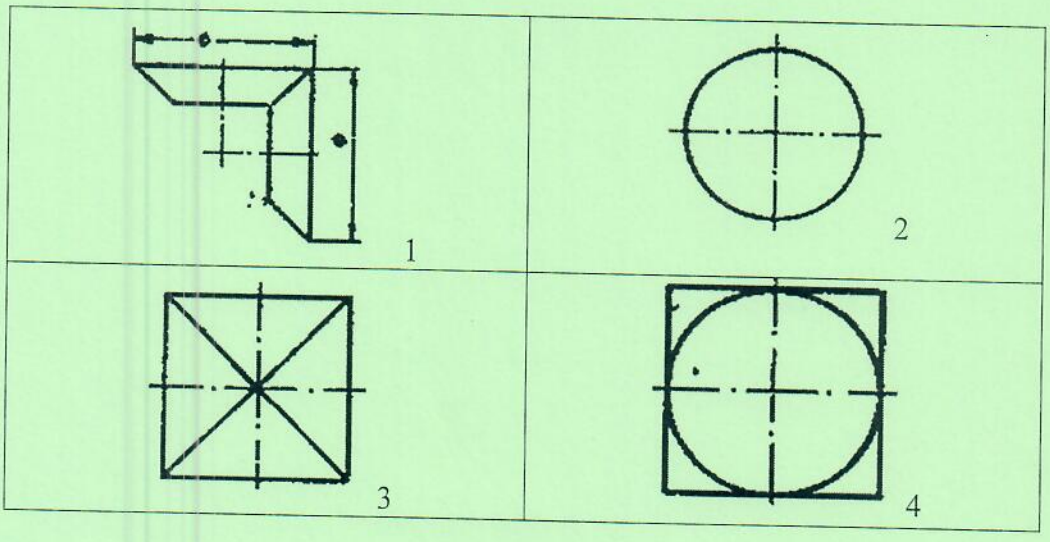
8 Which orthographic represents the shown isometric?



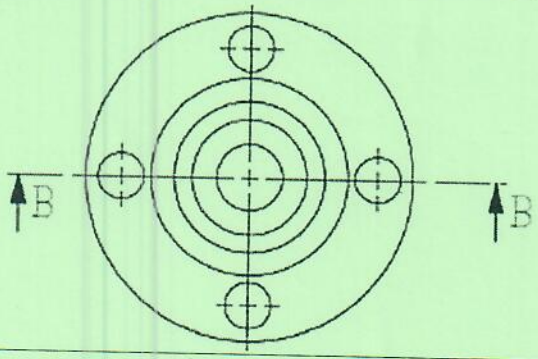
9 The front and top views are identical as represented here. However, the object is not a sphere. What is the correct side view?

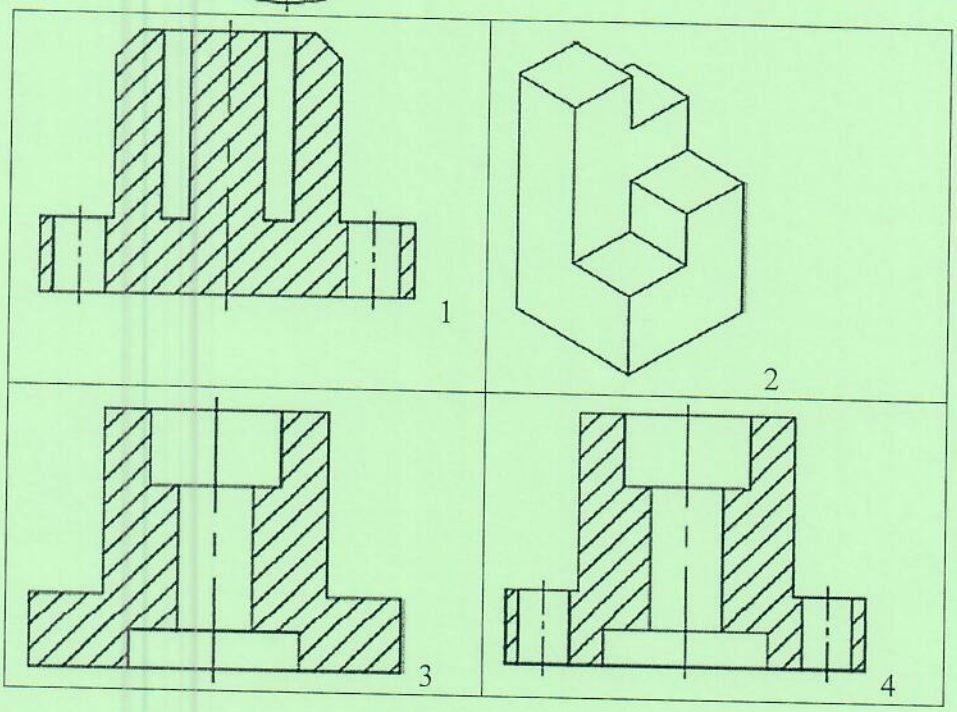


Front and Top view

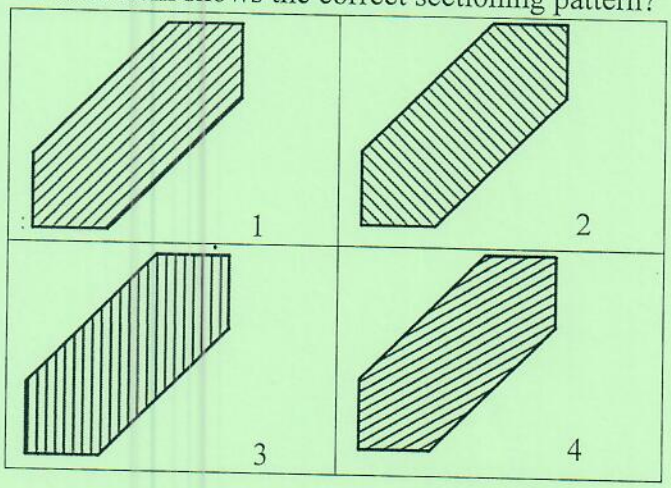


10 Which image is the Sectional View of the given Top View image?

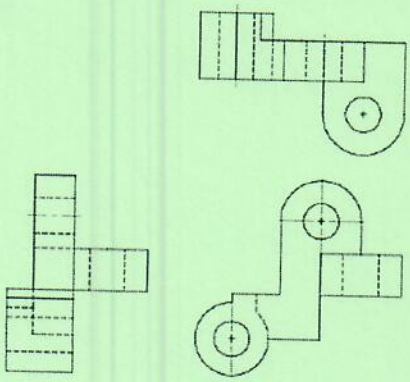


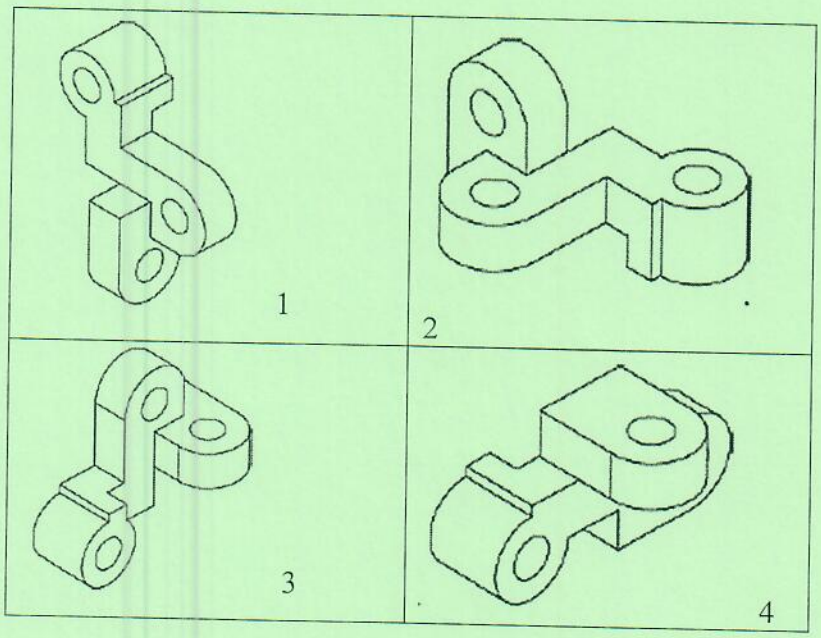


11 Which item shows the correct sectioning pattern?

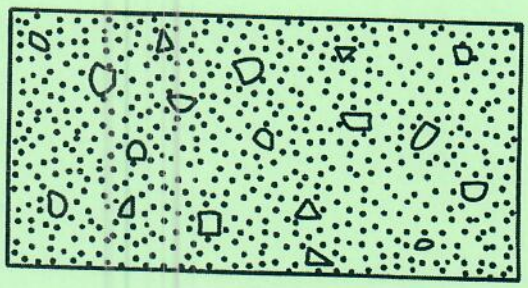


12 Which 3 dimensional object is represented by the orthographic drawings?



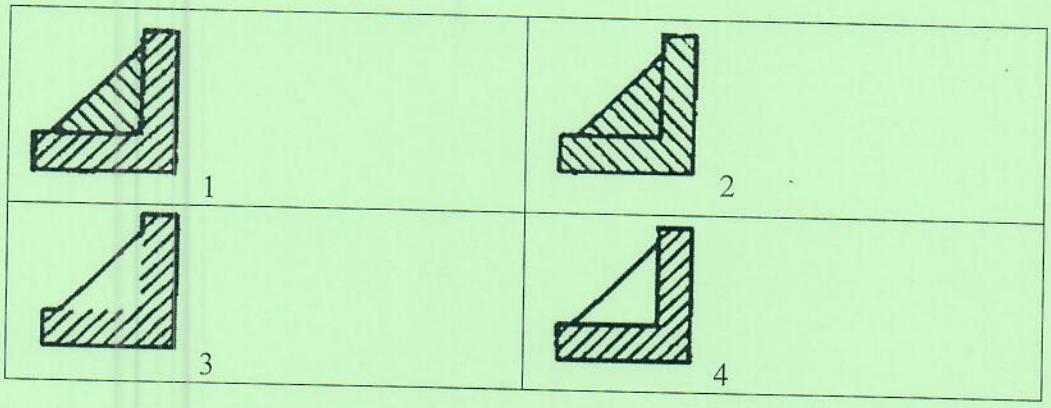


13 The material represented by section below is _____

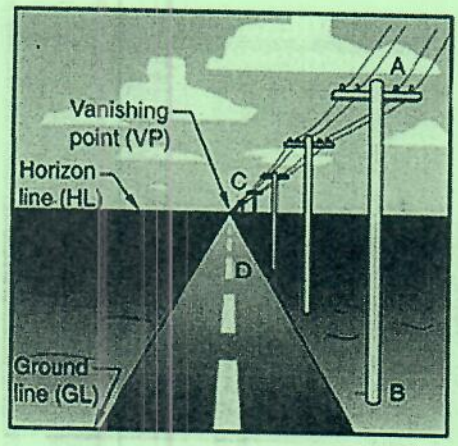


1: Mild steel
2: rubber
3: Concrete
4: Heat insulation

14 Which image below is sectioned correctly?

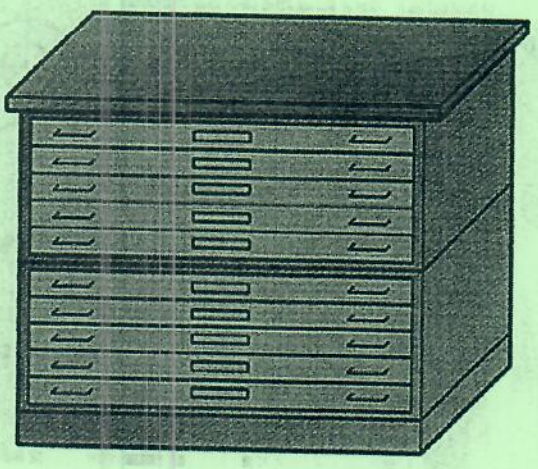


15 What type of image is shown?



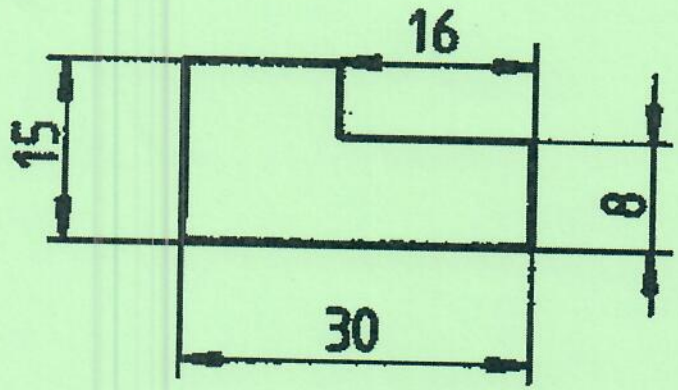
1: Isometric Projection
2: Perspective Projection
3: Oblique Projection
4: Multiview Projection

16 What kind of drawing represents the picture below?



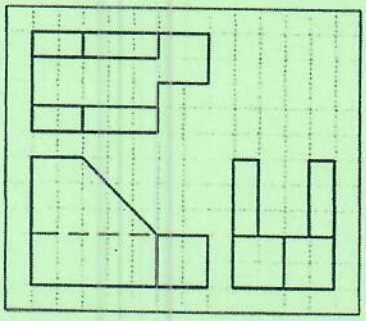
1: Isometric
2: Multiview
3: Perspective
4: Oblique

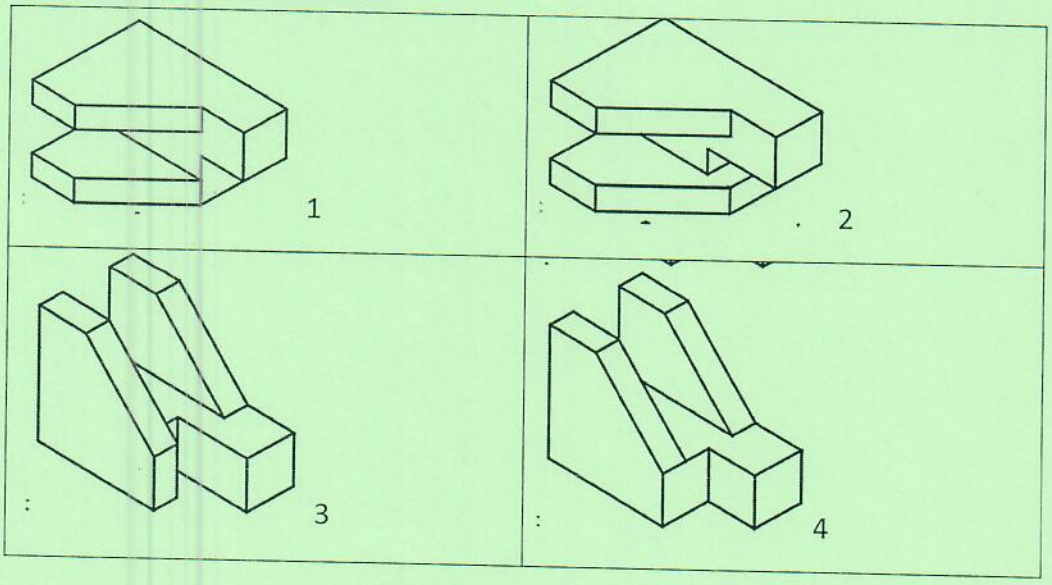
17 What dimension is wrongly placed in the drawing below?



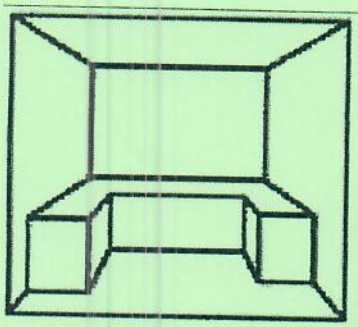
1: 8
2: 15
3: 16
4: 30

18 Choose an image to match the projected views.





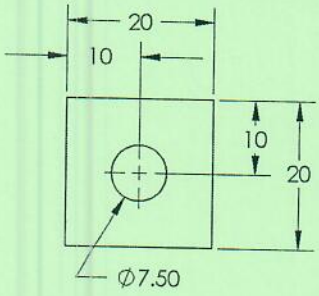
19 What type of three dimensional object is given below?



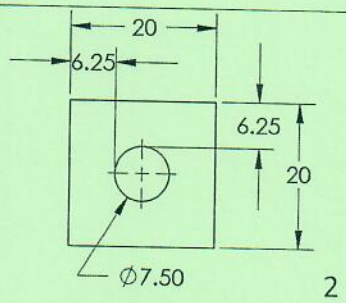
1: 1-point perspective
2: 2-point perspective
3: Isometric
4: Dimetric

1

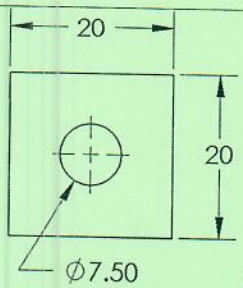
20 Which size determination is the most accurate?



1



2



3

4 None of the answers given

SECTION II ANSWER ANY TWO QUESTIONS

QUESTION 2

a) The floor plan of a 16 x 10 m house is to be drawn on an A4 paper. Determine the scale that would be appropriate for the floor plan if an allowance of 5 mm were to be used for the margin. [10 marks]

b) Figure 3 shows a link arm for a drawbar joint of an agricultural trailer. Draw the orthographic views of the link in paper provided.[20 marks]

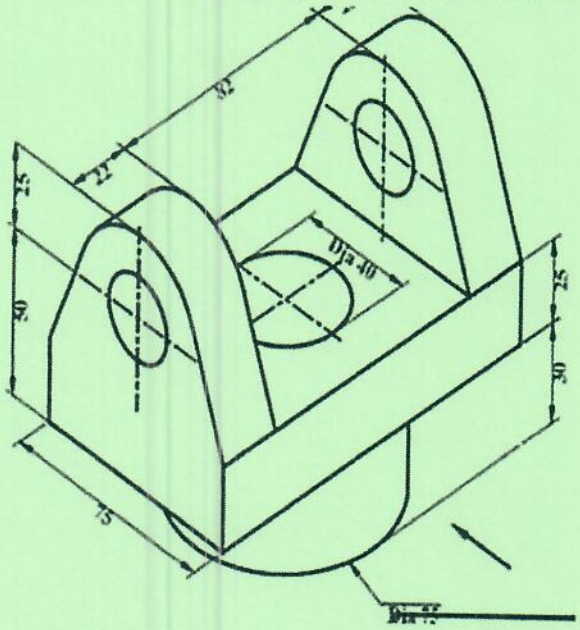


Figure 3 A drawbar link joint for a trailer

QUESTION 3

a) (i) What is a primary auxiliary view? [5 marks]

(ii) Name any three common primary auxiliary views. [6 marks]

(iii) Are orthographic projections of Figure 4 sufficient for production of the block or is it necessary to draw auxiliary views? [3 marks]

Give reasons for your answer. [6 marks]

b) Explain the significance of sectioning in the construction of buildings. [4 marks]

c) Provide any three common types of sections. [6 marks]

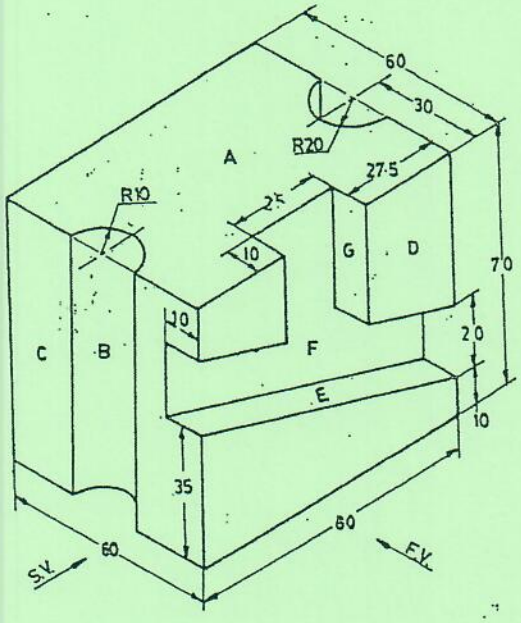


Figure 4 A tool holding block

QUESTION 4

a) What are working drawings? [2 marks]

b) What set of drawings form working drawings? [6 marks]

c) Name the three major categories of information included in a title block of a drawing. [9 marks]

d) Name any six mistakes in the dimension drawing of Figure 5. [6 marks]

e) Draw the correct dimensions in Figure 5a on page 8 for the step block.
[6 marks]

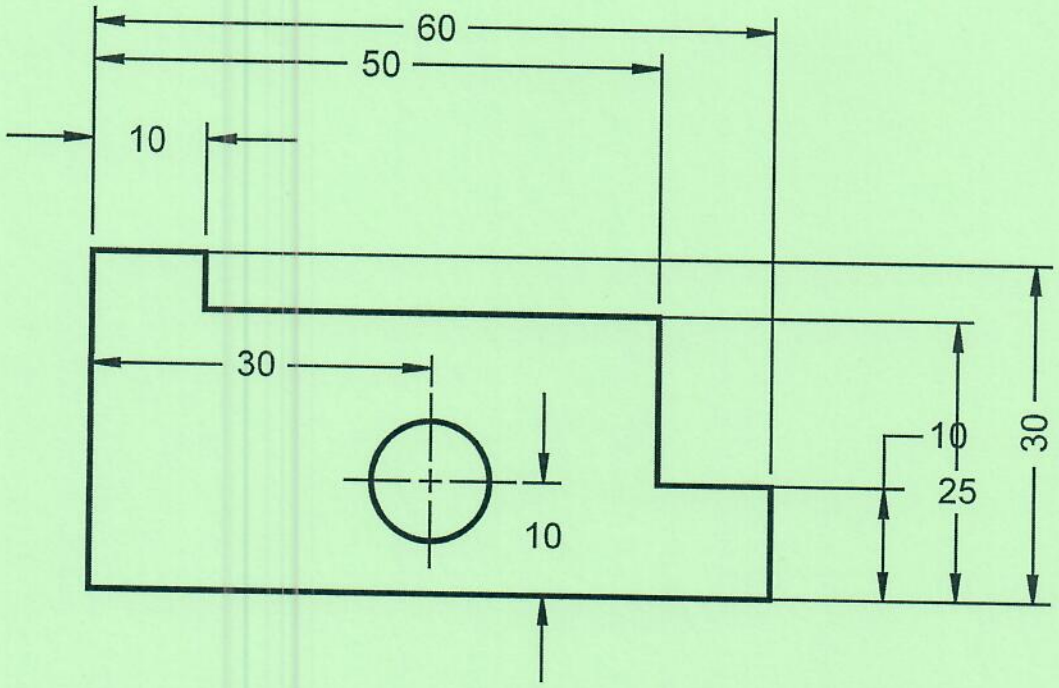


Figure 5 A block with dimensioning mistakes.

QUESTION 2 b) CANDIDATE NUMBER _____

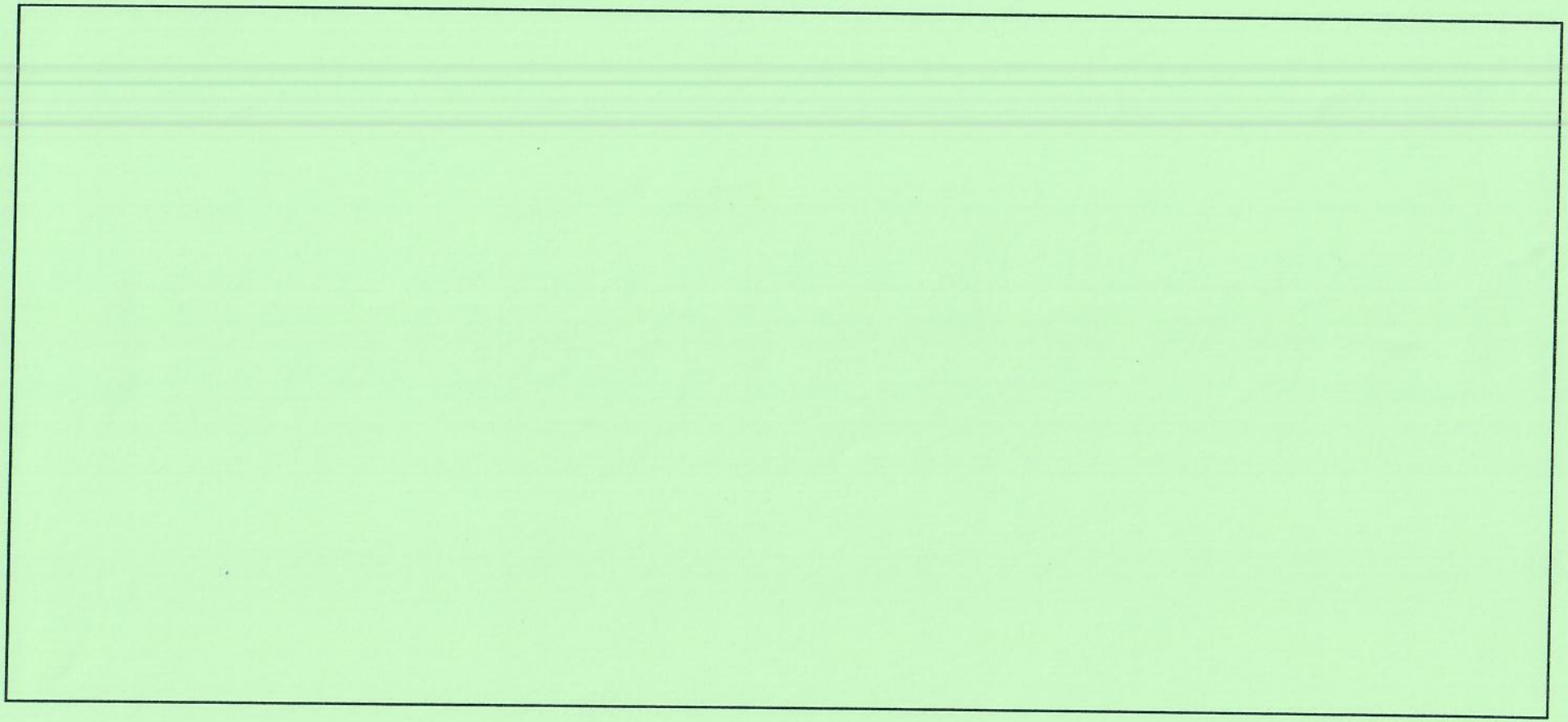


Figure 4a multiviews of a drawbar link joint

QUESTION 4 d)

CANDIDATE NUMBER _____

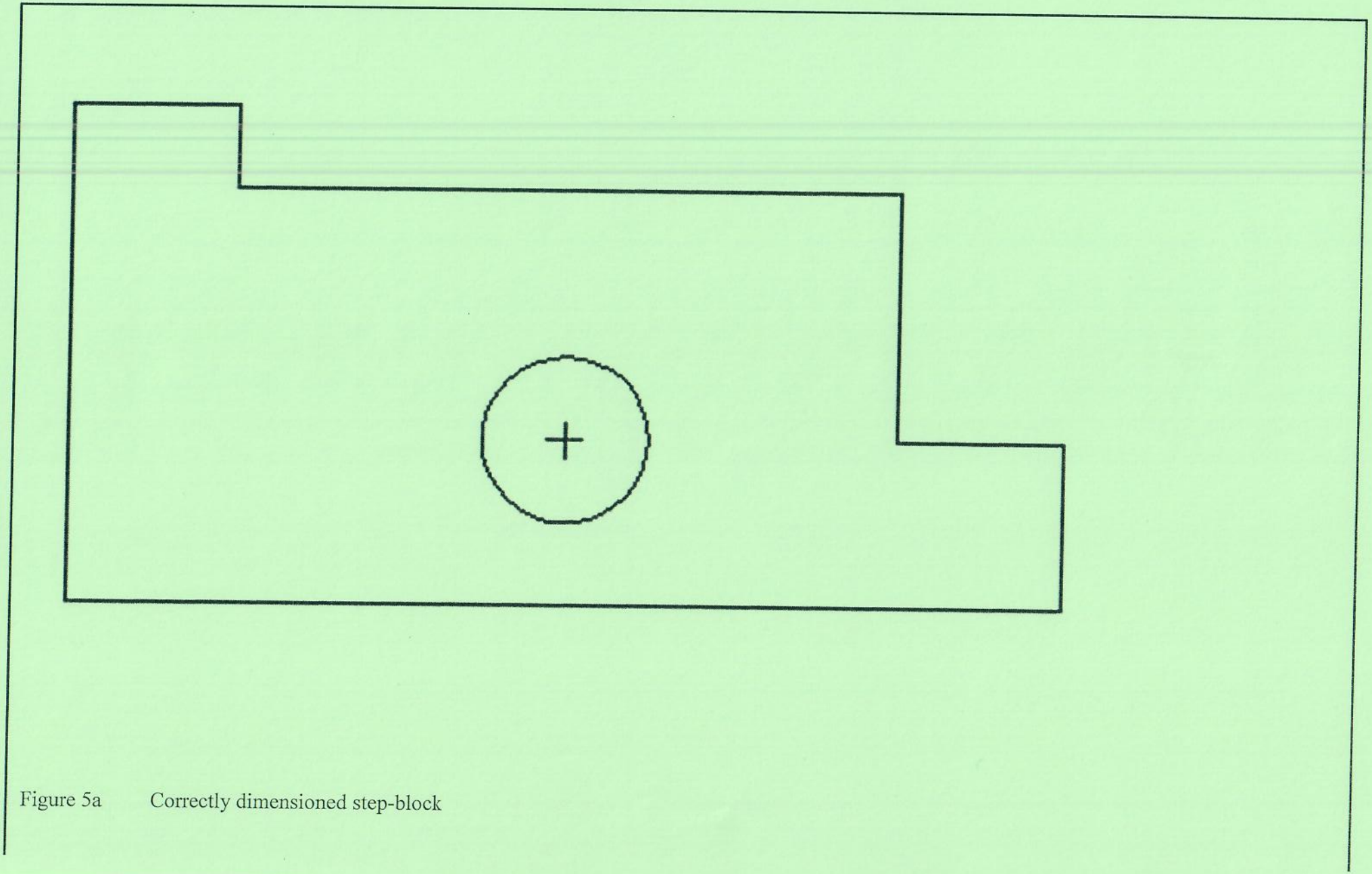


Figure 5a Correctly dimensioned step-block