



Junior Certificate Examination 2006

Technical Graphics
Ordinary Level
Section A (120 Marks)

Monday 19 June
Morning 9:30 - 12:00

Instructions

- (a) Answer **any ten** questions in the spaces provided.
All questions carry equal marks.
- (b) Construction lines must be clearly shown.
- (c) All measurements are in millimetres.
- (d) This booklet must be handed up at the end of the examination.
- (e) Write your examination number in the box provided below
and on all other pages used.

Examination Number:

Centre Number

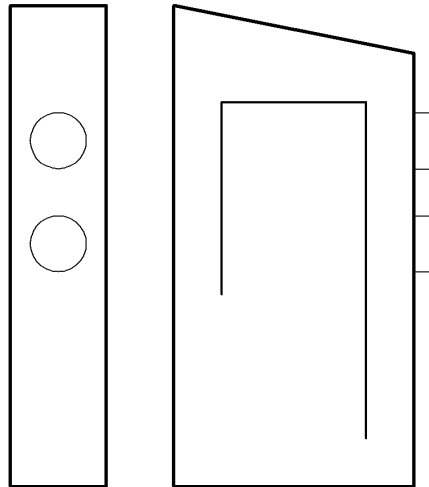
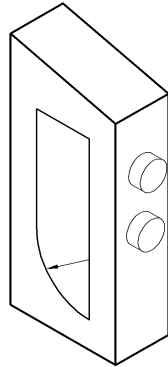
Question	Mark
Section A	
1	
2	
3	
4	
5	
6	
TOTAL	
GRADE	

SECTION A. Answer **any ten** questions. All questions carry equal marks.

1

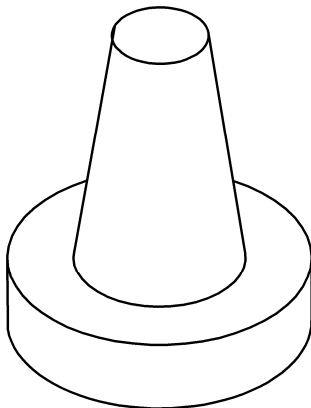
Shown is the **incomplete** elevation and **incomplete** end view of a pocket radio. Also shown is a sketch of the radio.

Insert the missing lines in both the elevation and end view.



2

Make a freehand pictorial sketch of the traffic cone in the space provided. Colour **or** shade the completed sketch.



3

Identify the computer components shown at **A** and **B** below.

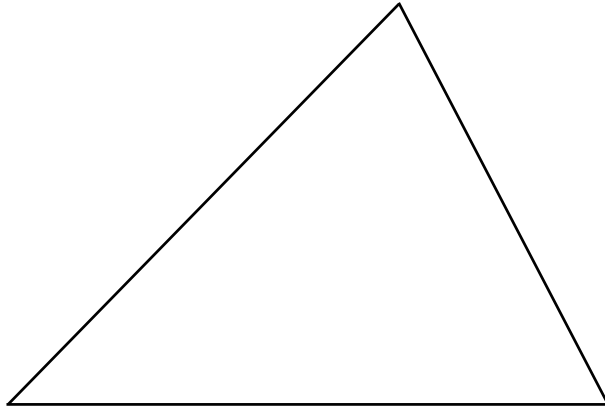


A : _____

B : _____

4

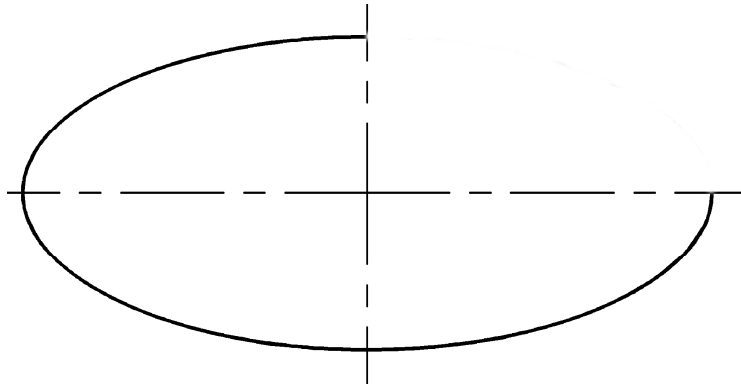
Convert the given triangle to a **rectangle** of equal area.



5

The figure shows a portion of an ellipse.

Complete the ellipse showing clearly the construction used to complete the ellipse.

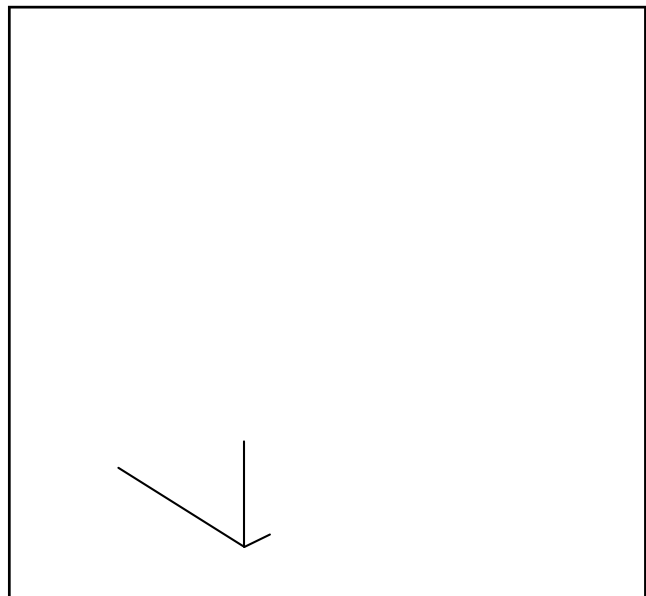
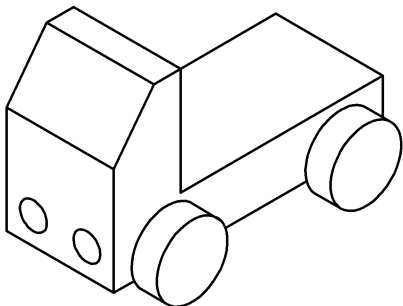


6

Shown is a pictorial drawing of a child's toy.

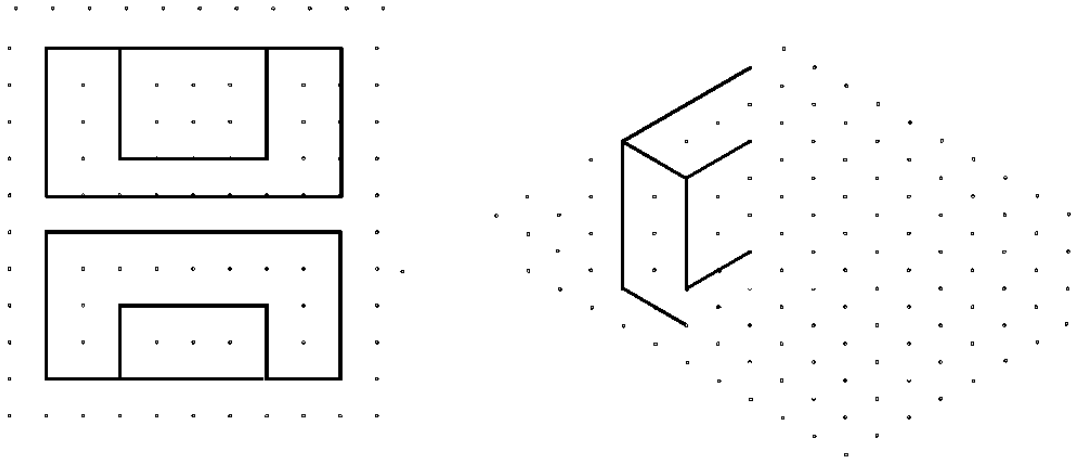
Make a well proportioned **freehand sketch** of the toy in the space provided.

Colour **or** shade the completed sketch.



7

The elevation and plan of a garden seat are shown.
Complete the isometric view of the garden seat on the grid provided.

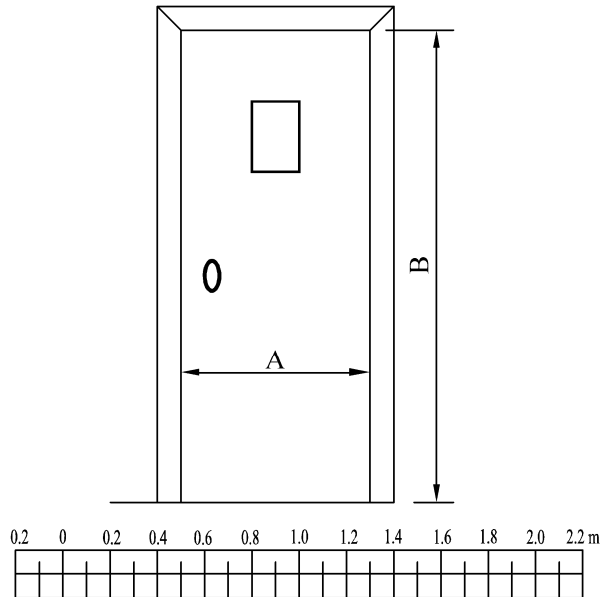


8

Using the scale provided,
measure and **record** the
 dimensions **A** and **B** of
 the door shown.

A: _____

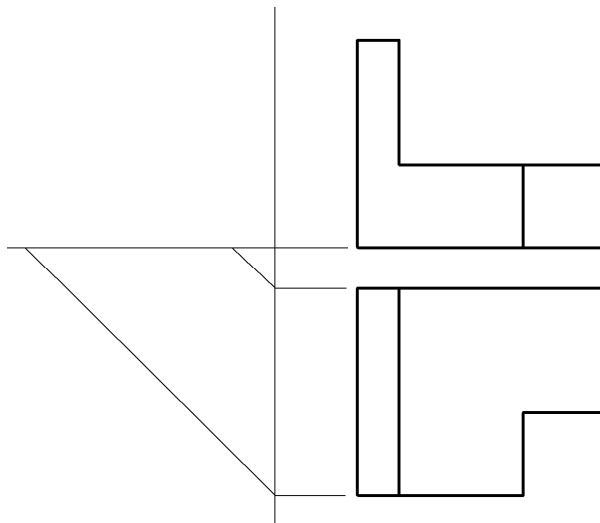
B: _____



9

The elevation and
 plan of a shaped
 block are shown.

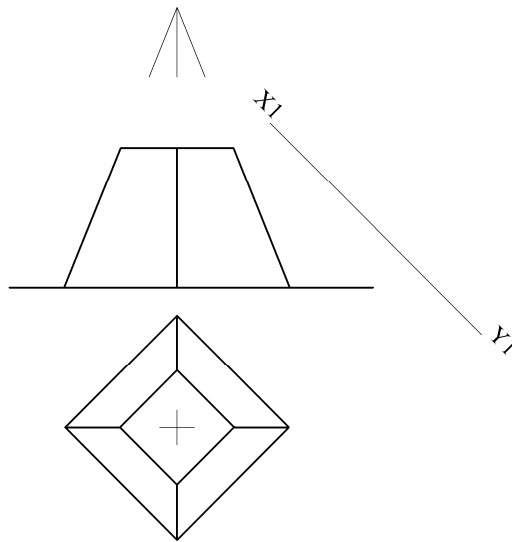
Complete the end
 view in the space
 provided.



10

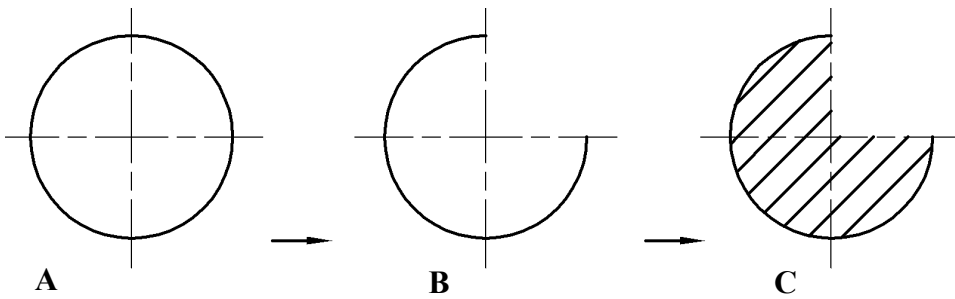
The elevation and plan of a lamp shade are shown.

Project an auxiliary elevation of the lamp shade on the given X1 - Y1 line.



11

List the CAD commands used to produce the figures A to B to C below.

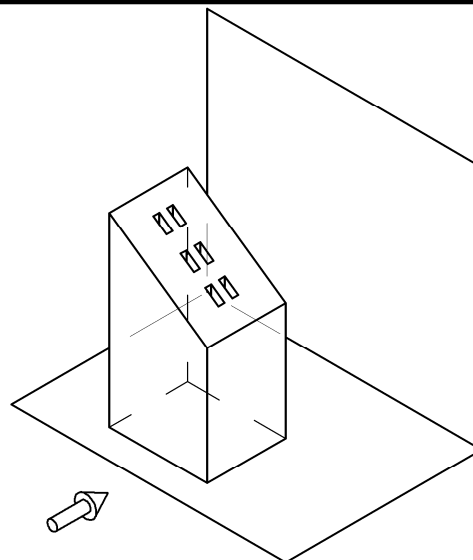


Commands:

A _____ B _____ C _____

12

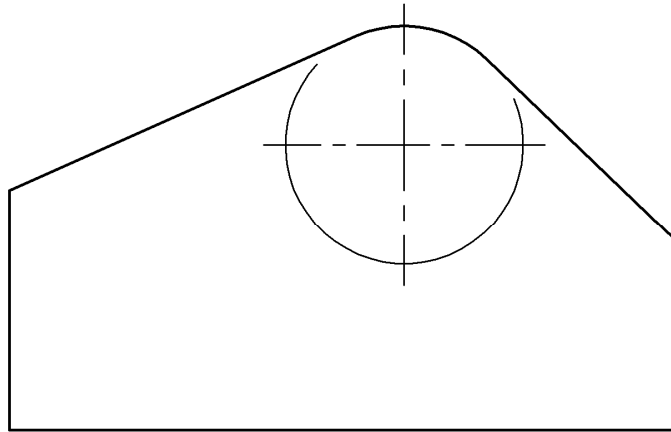
Sketch the **shadow** cast by the knife block shown when the light source is from the direction of the arrow.



13

The drawing shows the outline of a farm shed.

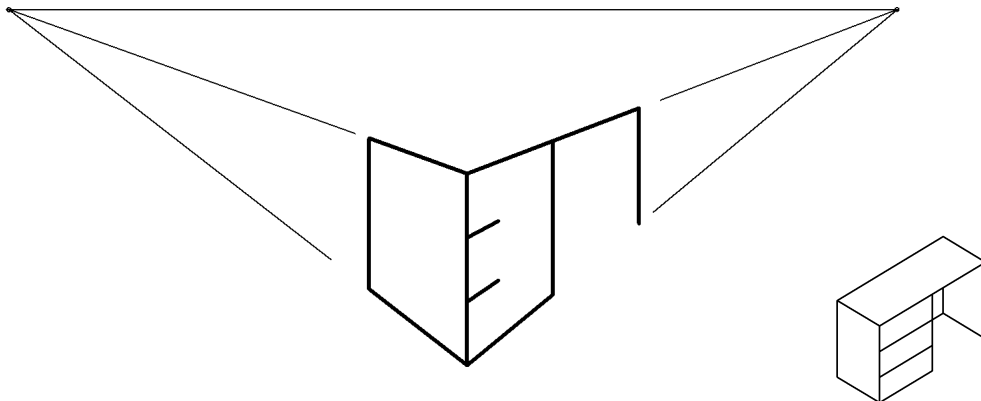
Show clearly the points of contact between the circle and the straight lines.



14

The figure shows an **incomplete** two point perspective drawing of a computer desk. Also shown is a small sketch of the computer desk.

Complete the perspective drawing of the computer desk.



15

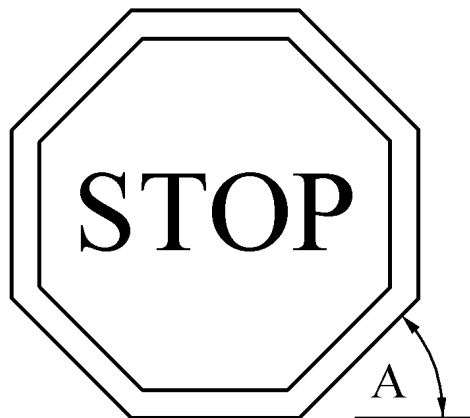
The figure shows a common road sign.

(a) Identify the shape of the road sign.

(b) Indicate the size of the angle A.

Shape of the road sign: _____

Size of the angle A: _____



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Junior Certificate Examination 2006

Technical Graphics
Ordinary Level
Section B (280 Marks)

Monday 19 June
Morning 9:30 - 12:00

Instructions

- (a) Answer **any four** questions. All questions carry equal marks.
- (b) The number of the question must be distinctly marked by the side of each answer.
- (c) Work on **one side** of the answer paper only.
- (d) Write your examination number on each sheet of paper used.

SECTION B (ANSWER ANY FOUR QUESTIONS - ALL QUESTIONS CARRY EQUAL MARKS)

1

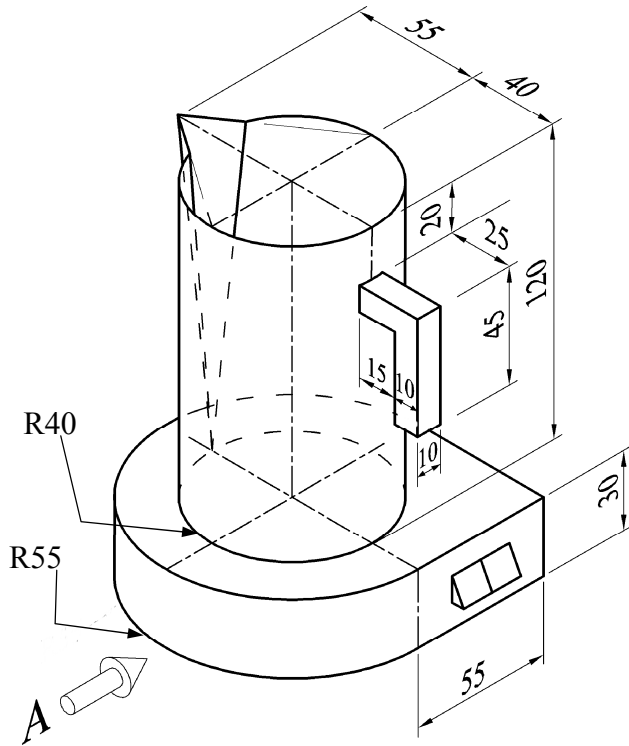
The figure shows the outline of a **Jug Kettle**.

Draw:

- (a) A front elevation looking in the direction of arrow A;
- (b) A plan projected from the front elevation.

Insert **any four** dimensions.

Note:
Use your own dimensions for the switches on the base.

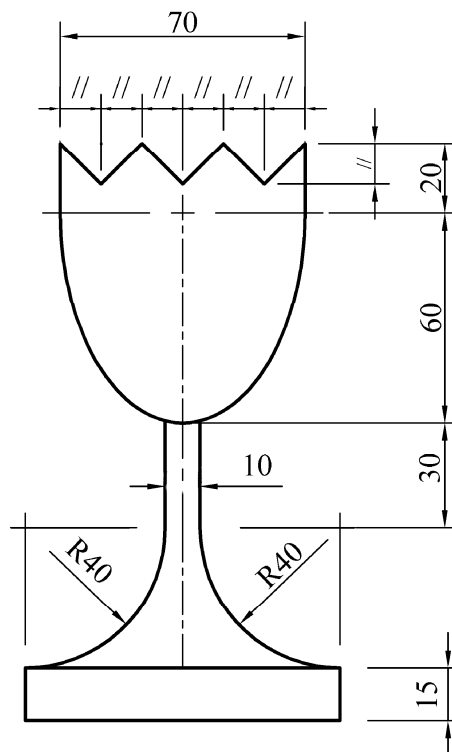


2

The figure shows the design of an egg cup based on a semi-ellipse as shown.

The major axis of the ellipse is 120 and the minor axis is 70.

Draw the given design showing clearly all construction lines.

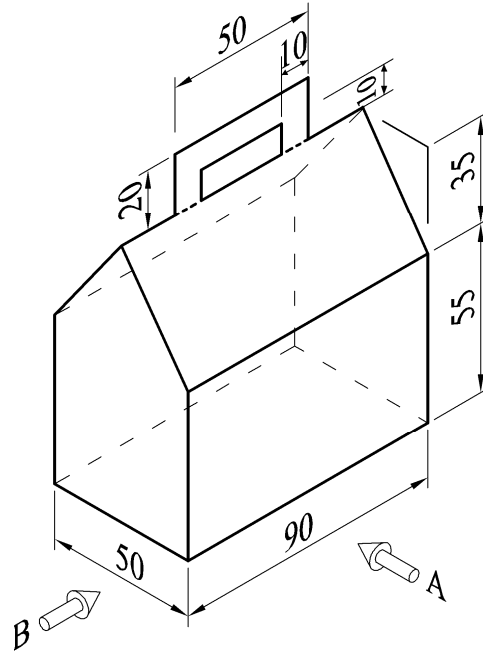


3

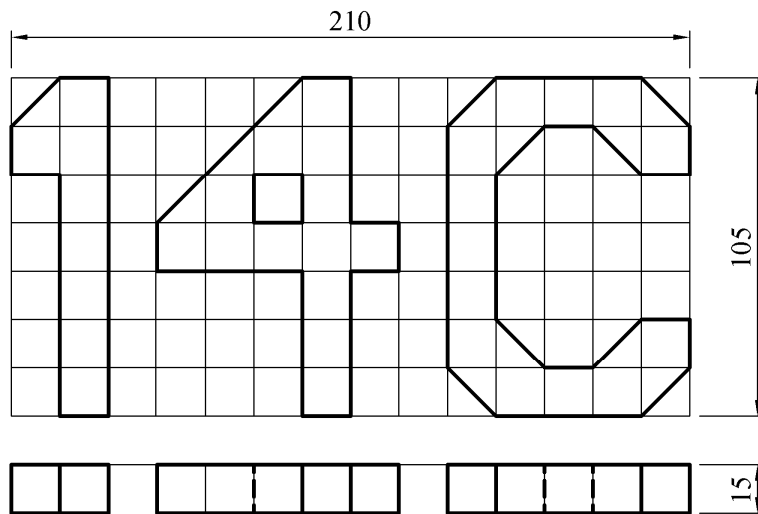
The figure shows the outline of a child's **lunch box**.

Draw:

- (a) A front elevation looking in the direction of arrow **A**.
- (b) An end view looking in the direction of arrow **B**.
- (c) The complete **surface development** of the lunch box.



4



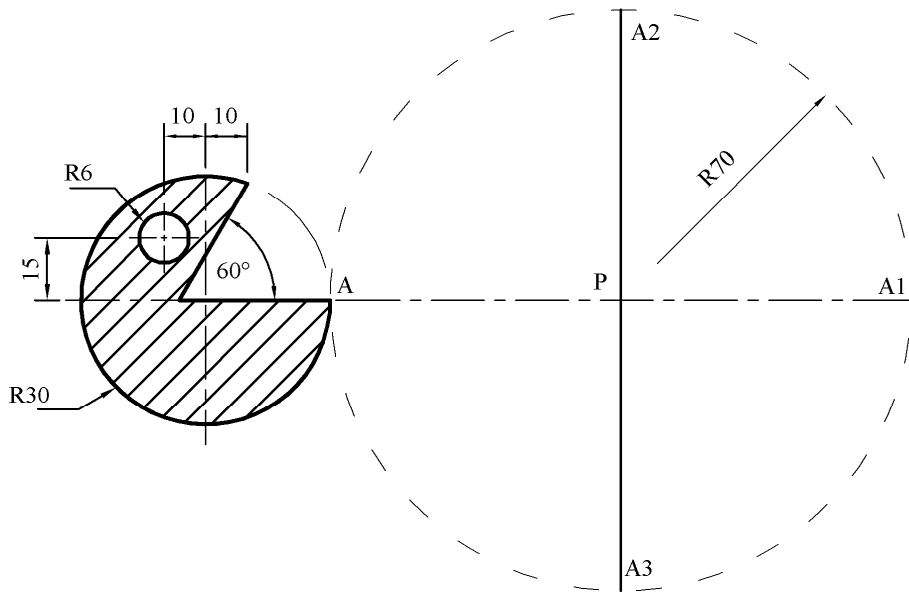
The figure shows the elevation and plan of the number plate for an apartment. The grid is made up of 15mm squares.

Draw **one** of the following views:

- (a) An **isometric** view;
- or
- (b) An **oblique** view of the number plate.

Note: The solution must be presented on standard drawing paper.

5



Draw the given figure. Locate the points **A**, **A1**, **A2**, **A3** and point **P**.

Find the image of the given figure under the following transformations:

- (a) From point **A** to **A1** by an **axial symmetry** in the line **A2 - A3**;
- (b) From point **A1** to **A2** by a **translation**;
- (c) From point **A2** to **A3** by a **central symmetry** in the point **P**.

6

A design for a battery powered screwdriver is shown.

Reproduce the given figure, showing clearly all construction lines and points of contact.

