



Coimisiún na Scrúduithe Stáit

State Examinations Commission

Junior Cycle Final Examination 2026

Graphics

Common Level

Tuesday 9 June

Morning 9:30 - 11:30

280 marks

Centre Stamp

Question	Mark
1	
2	
3	
4	
5	
Paper Total	
Student Project	
Grand Total	
Grade	

Examination Number

Date of Birth

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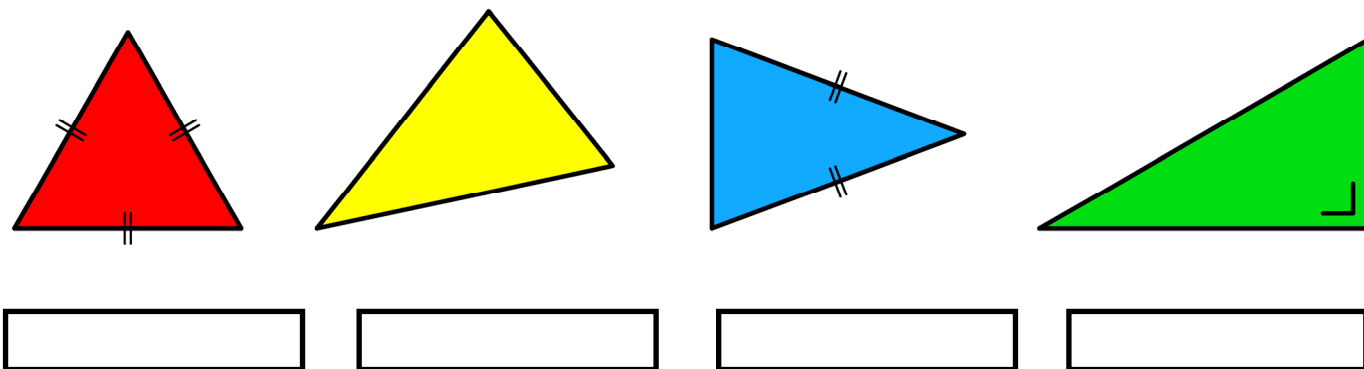
For example, 3rd February
2005 is entered as 03 02 05

General Instructions:

- Answer all questions
- All constructions must be clearly shown
- All measurements are in millimetres
- The graphics presented are not necessarily drawn to scale
- Complete your answers in the spaces provided in this booklet
- When using a T-square, you may mount the back cover of this booklet to your drawing board or desk, using tape
- There is space for extra work at the end of the booklet
Label any such extra work clearly with the question number and part
- This booklet must be handed up at the end of the examination.

1. (a) Using the list given below, label **each** triangle in the space provided.

- Scalene
- Right angled
- Equilateral
- Isosceles



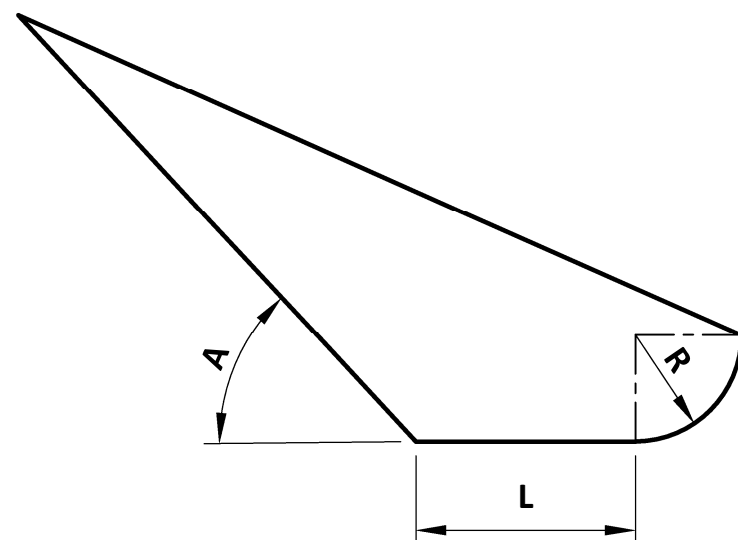
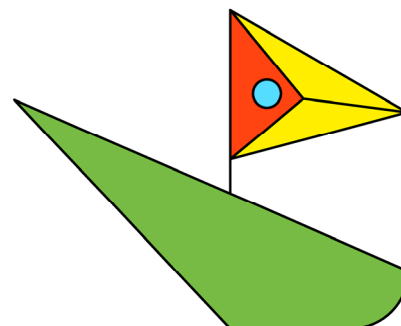
(b) The image on the right shows the design of a logo for a birdseed company.

Use your drawing instruments to measure the following:

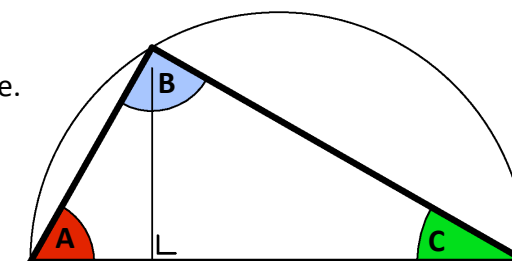
Angle **A** =

Length **L** =

Radius **R** =



(c) Shown on the right is a triangle inscribed in a semi-circle. Using a ✓ indicate whether each of the following statements is **true** or **false**.



(i) The sum of **A**, **B**, and **C** equals 180° .

True
☐

False
☐

(ii) The angle at **B** equals 90° .

☐

☐

(iii) The area of a triangle is calculated by multiplying the length of the base by the perpendicular height.

☐

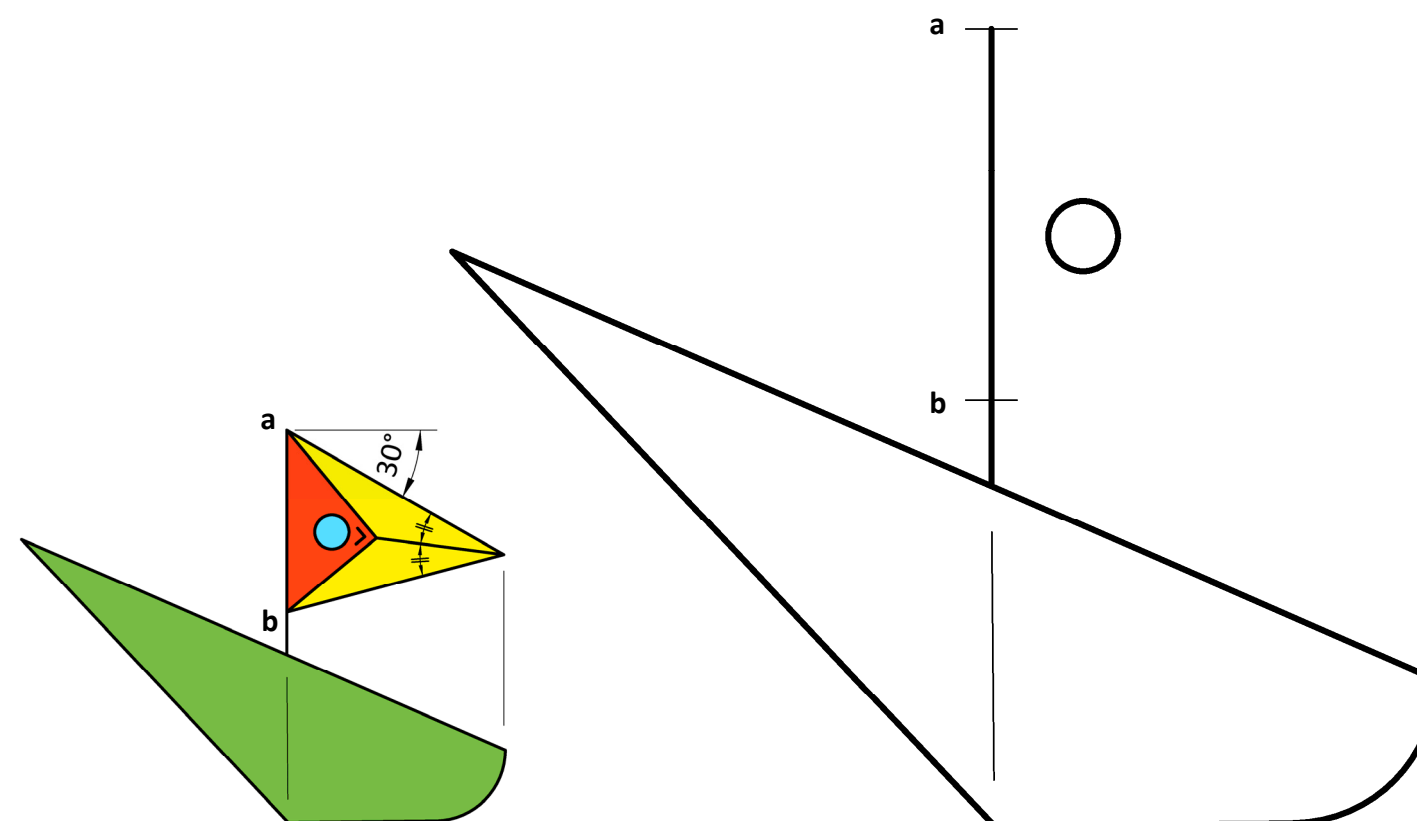
☐

(d) The image on the left below shows the birdseed company logo. The design of the logo includes three triangles.

Also shown is an incomplete drawing of the logo.

Using the information provided in the image, complete the drawing of the logo.

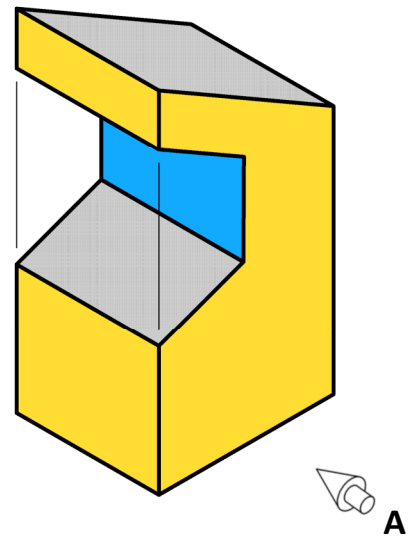
Show all constructions clearly.



2.

- (a) Shown below is an arcade gaming machine.

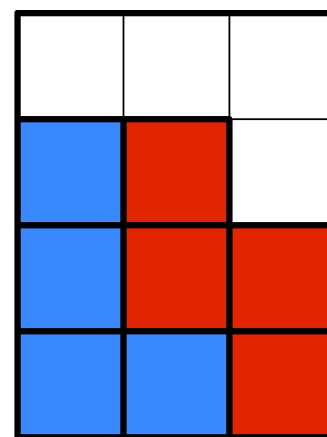
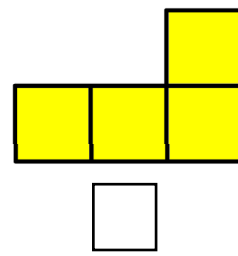
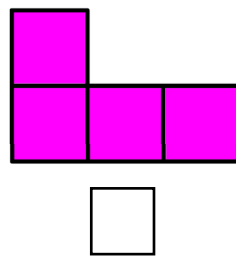
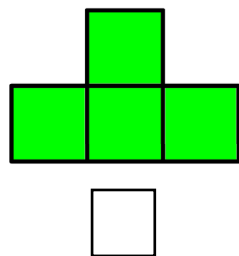
In the space provided, draw a well proportioned **freehand** sketch of the **end view** of the gaming machine looking in the direction of arrow **A**.



- (b) The image across shows an arrangement of blocks from the *Tetris* arcade game.

Shown below are three Tetris blocks.

Using a ✓ indicate which one of the blocks below would complete the puzzle.

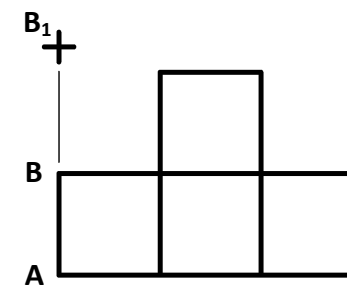
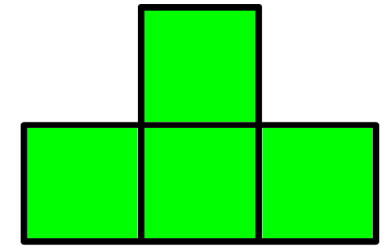


Tetris Puzzle

- (c) The image across shows a Tetris block.

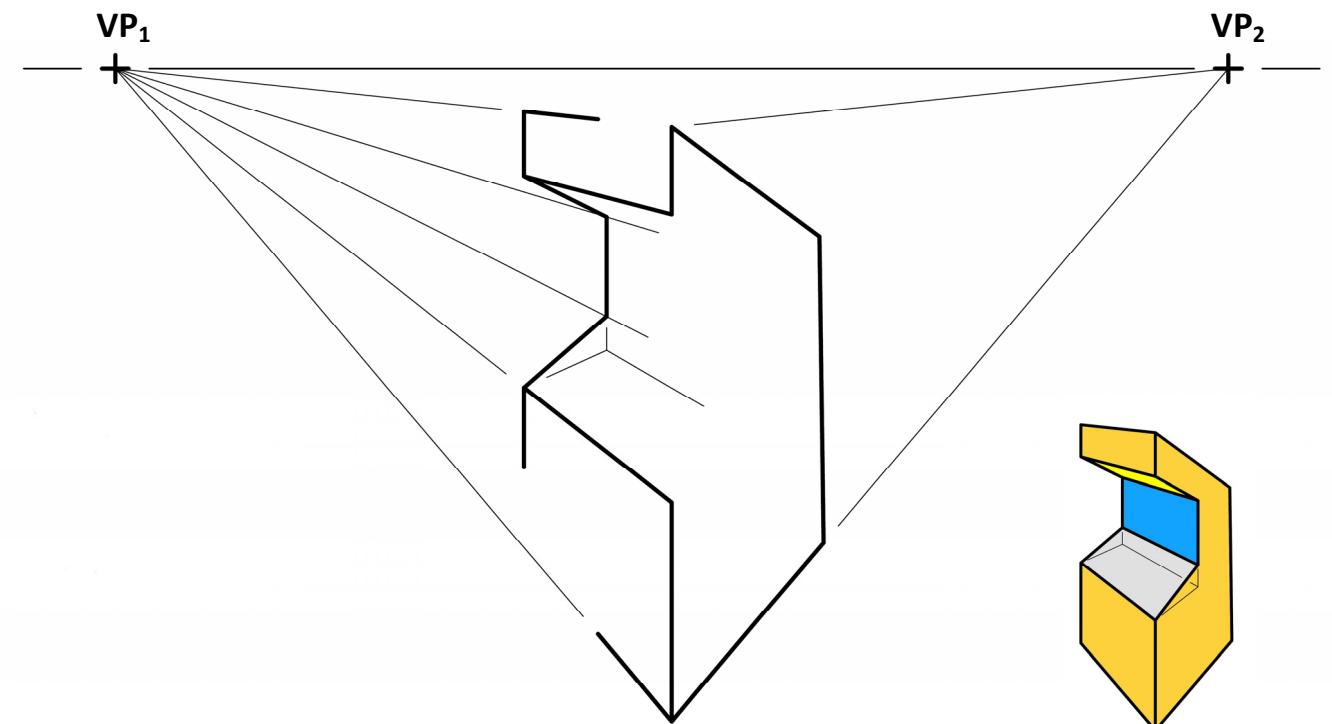
Shown below is the outline of a similar block.

Draw a new block similar to the given block with height **AB** increased to **AB₁**.

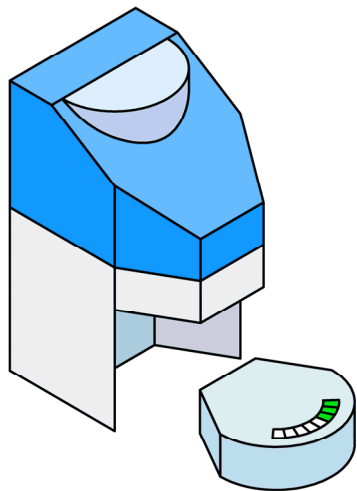


- (d) Shown below is an incomplete perspective drawing of the gaming machine. A 3D graphic is also shown.

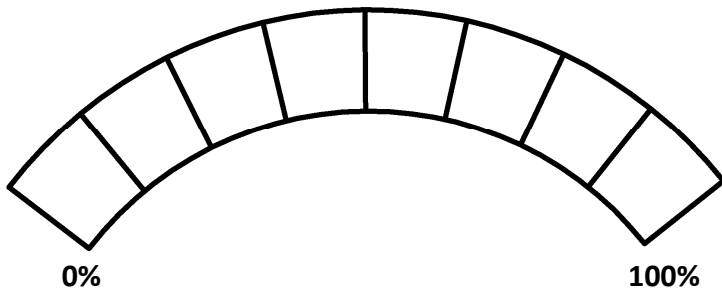
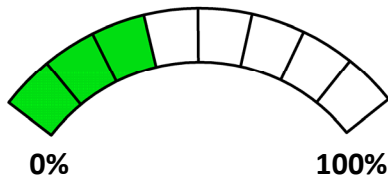
Complete the perspective drawing of the machine.



3. Shown below is a robot vacuum cleaner and docking station.

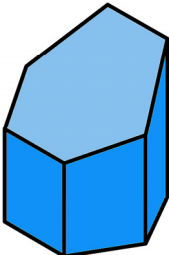
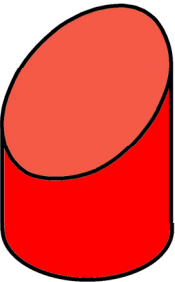
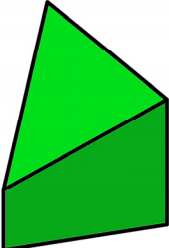
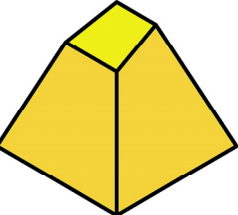


(a) The image on the left below shows the power display for the vacuum cleaner. Shade the outline display on the right to show the power level at **75%** charged.

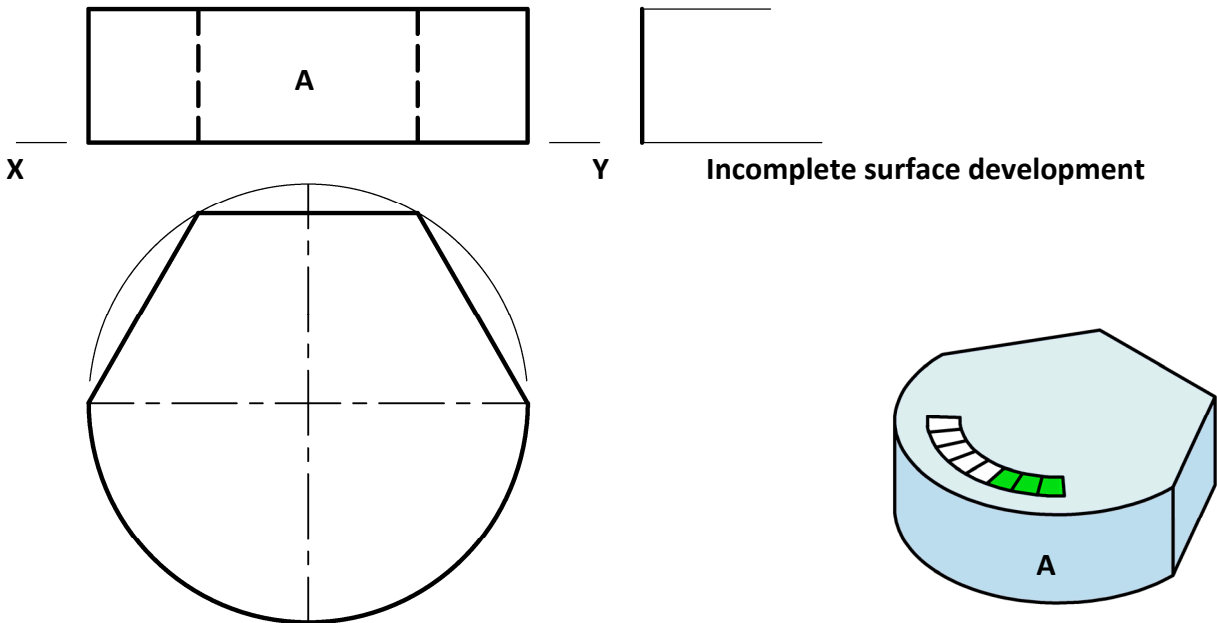


(b) Using the list given below, label each truncated solid in the space provided.

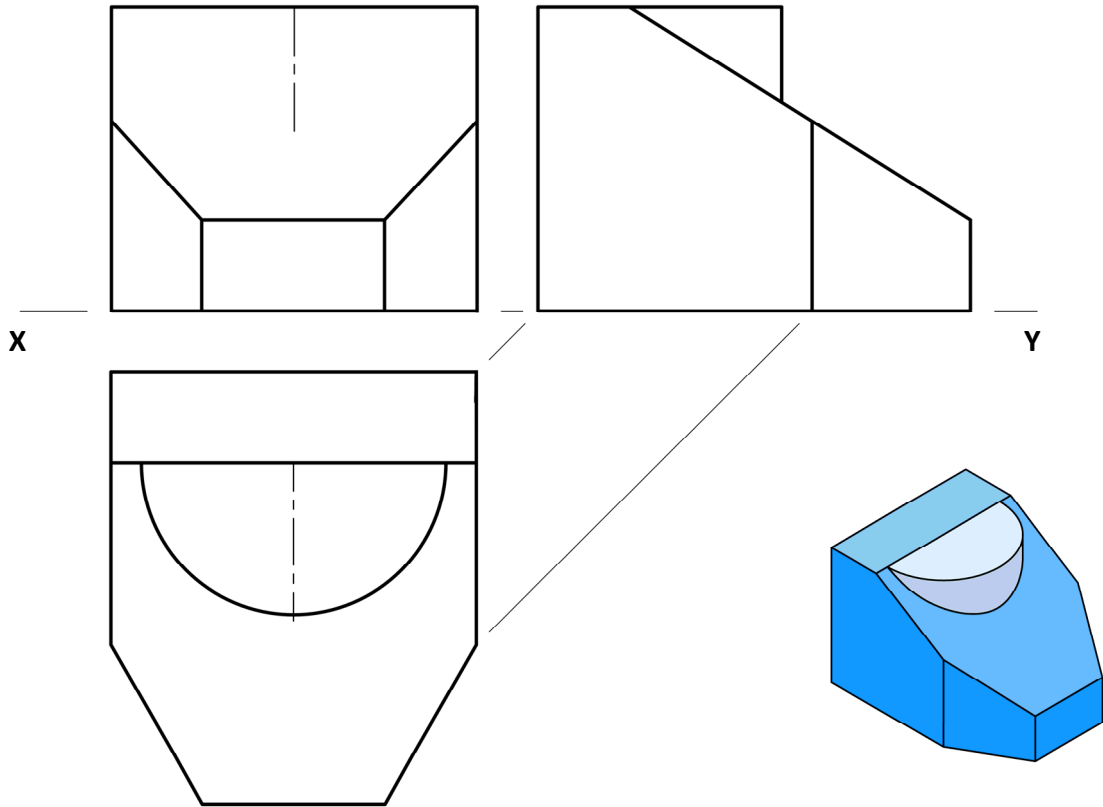
- Triangular based prism
- Square based pyramid
- Hexagonal based prism
- Cylinder

(c) The image on the right below shows the robot vacuum cleaner. The front surface **A** is a semi-cylinder. Shown below is the elevation, plan, and incomplete surface development of semi-cylinder **A**. Complete the development of surface **A**.



(d) Shown on the right below is an image of the top portion of the docking station. Also shown is a plan, end view, and incomplete elevation of the top of the docking station. Complete the elevation.

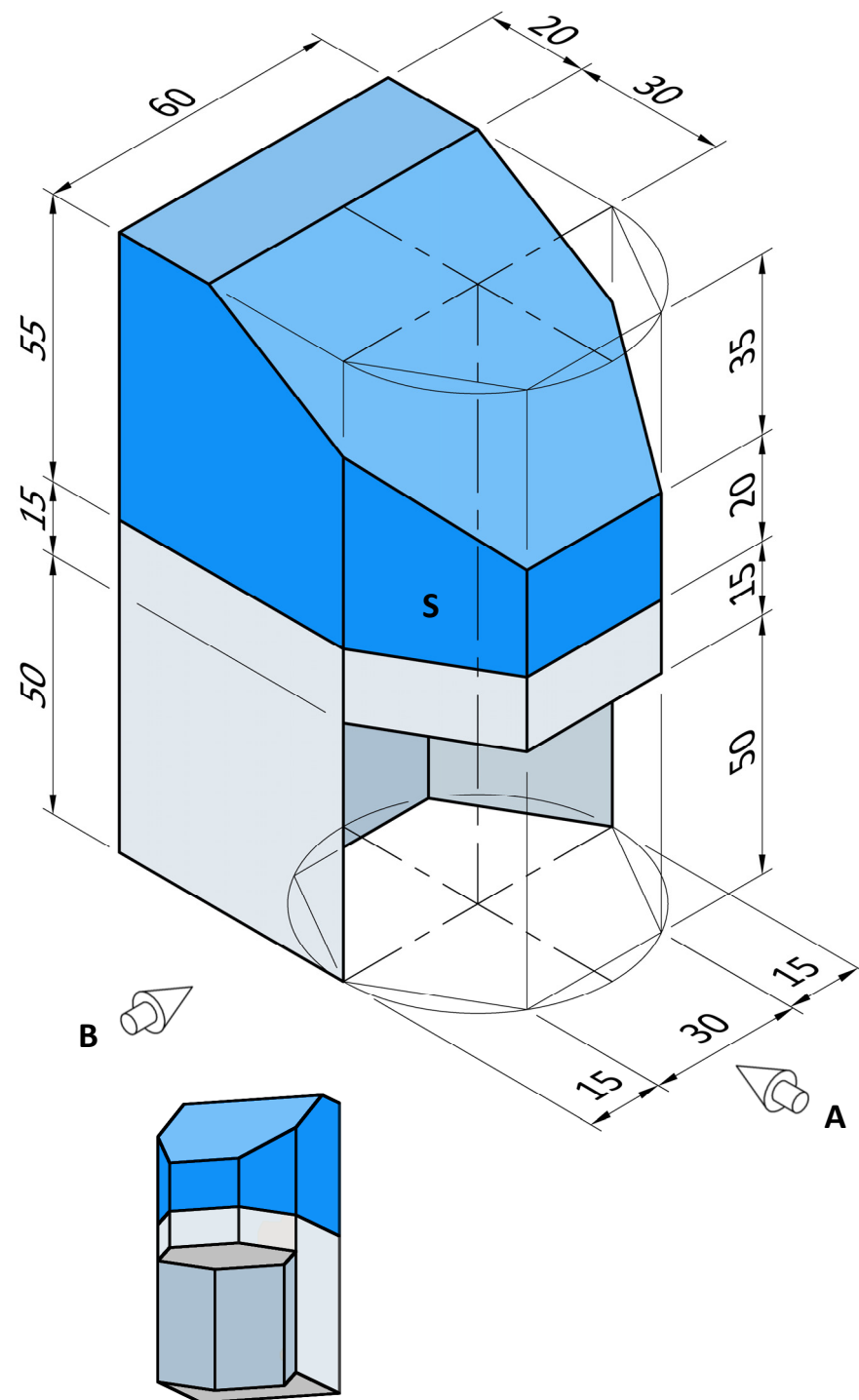


(e) The images below show the design of the docking station for a robot Hoover.

Note: The top truncated semi-cylinder has been omitted.

Draw:

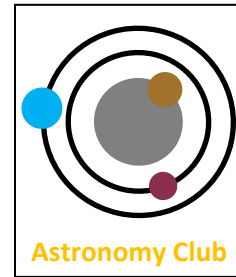
- (i) An elevation in the direction of arrow **A**.
- (ii) A plan projected from the elevation.
- (iii) An end view in the direction of arrow **B**.
- (iv) Determine the true shape of surface **S**.



4.

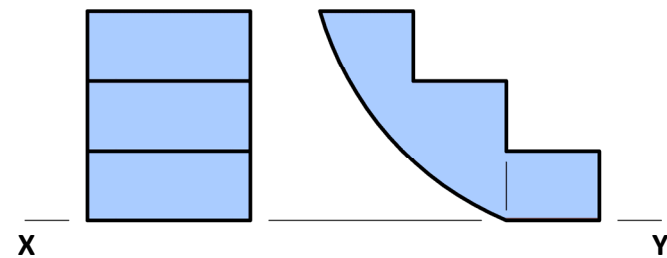
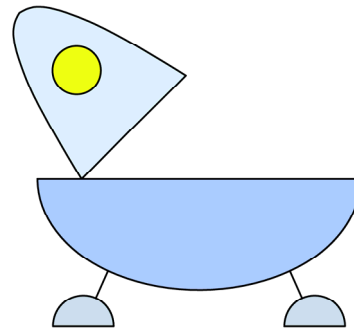
- (a) Shown across is the design of a logo for an astronomy club.
The design is based on circles.
Using the following circle terms, complete the sentences below.

• Centres • Diameter • Circumference • Chord

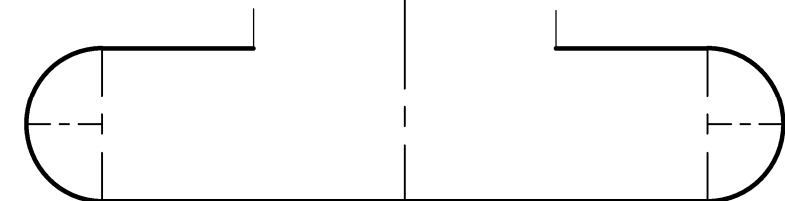
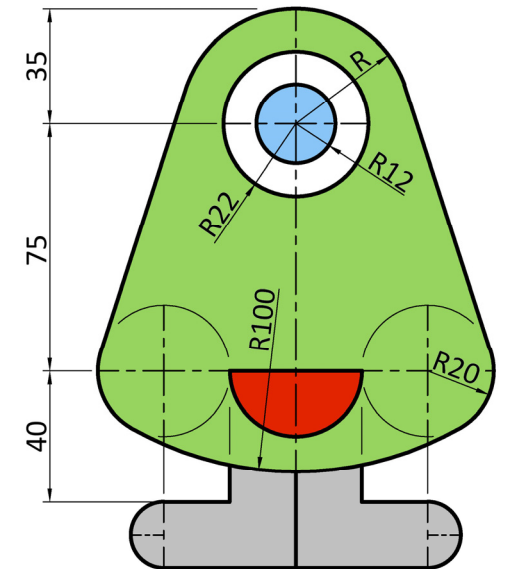


- (i) The line which passes through the centre of the circle is called the _____.
- (ii) A sector is the area enclosed by two radial lines and the _____.
- (iii) The bisector of any _____ will pass through the centre of the circle.
- (iv) When two circles are touching externally you add their radii to find the distance between their _____.

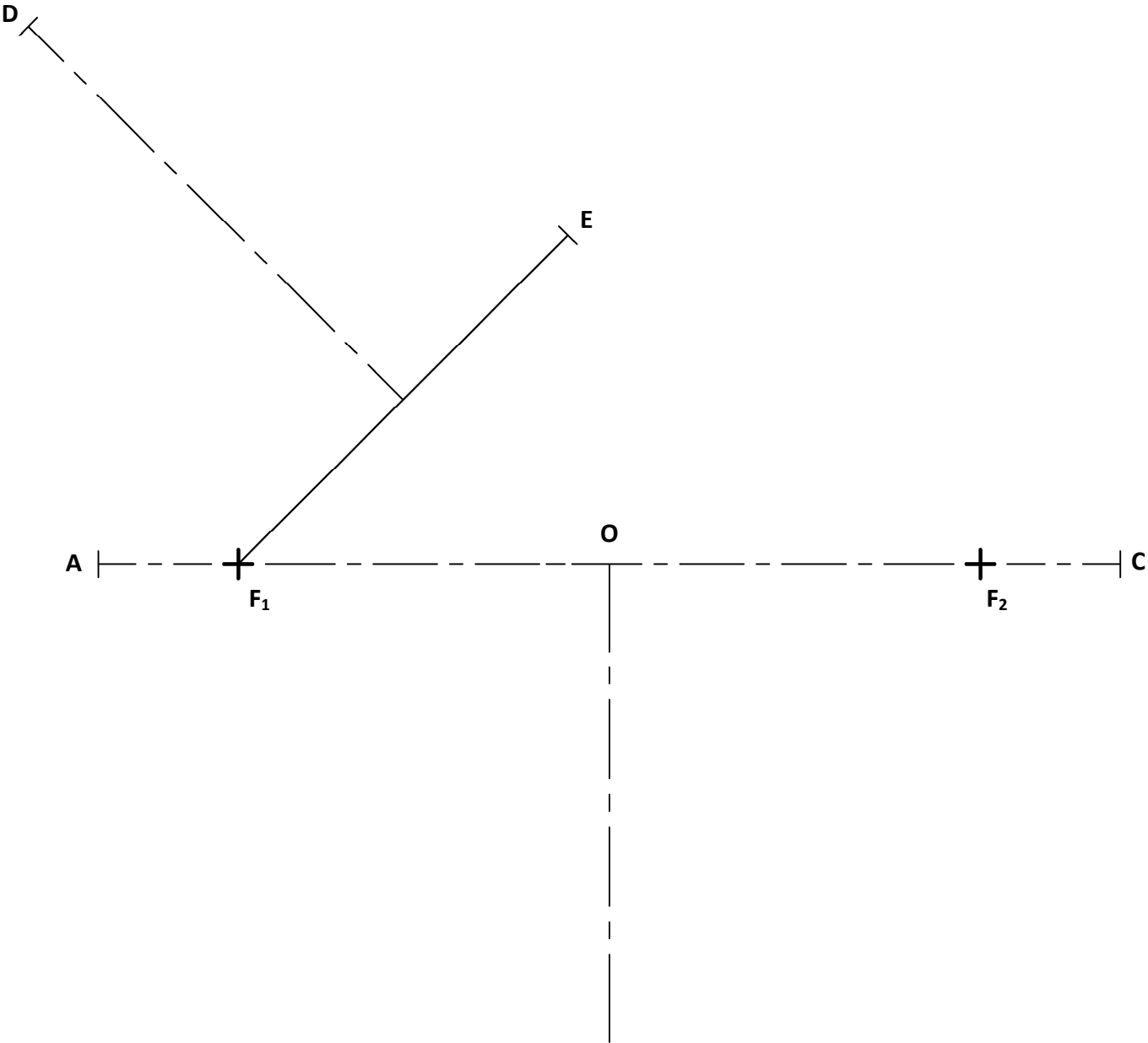
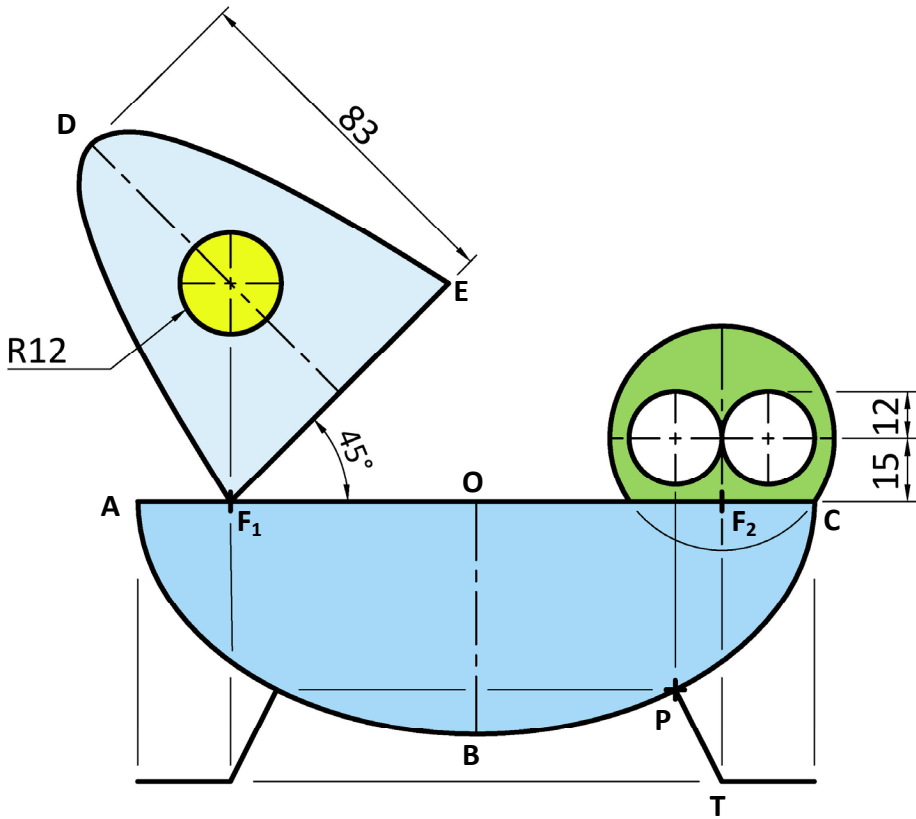
- (b) The image shows a design for an alien spaceship.
The elevation and end view of the steps for the spaceship are shown below.
In the space provided, draw a **freehand pictorial sketch** of the steps.
Colour **or** shade the sketch.



- (c) The image on the right shows an alien character.
Shown below is an incomplete drawing of the alien.
Using the information provided in the image, complete the drawing of the alien.
Show all construction lines, tangents, and points of contact.

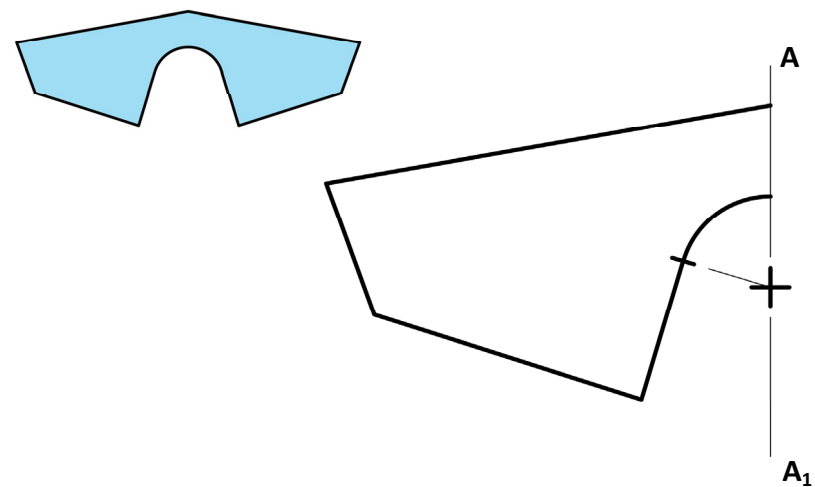


- (d) Shown below is a dimensioned drawing of the spaceship and an alien.
- The curve **ABC** is a semi-ellipse. **AC** is the major axis and **OB** is half the minor axis of the ellipse.
- F₁** and **F₂** are focal points of the ellipse. Point **P** is a point on the ellipse.
- PT** is a normal to the ellipse at point **P**.
- The curve **F₁DE** is a parabola with vertex at **D**.
- (i) The length of the major axis **AC**, the focal points **F₁** and **F₂** and position of the minor axis are given across. Find the length of half the minor axis and draw the semi-ellipse.
- (ii) Using the dimensions given, complete the drawing.

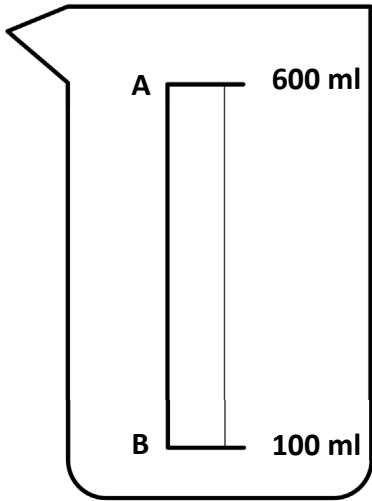
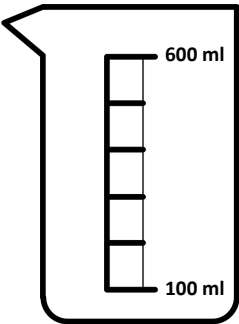


5. The image across shows equipment from a science laboratory.

- (a) Shown below is an outline drawing of a pair of safety glasses. Also shown is an incomplete drawing of a similar pair of safety glasses.
- Complete the glasses by constructing an axial symmetry in the line $A-A_1$.



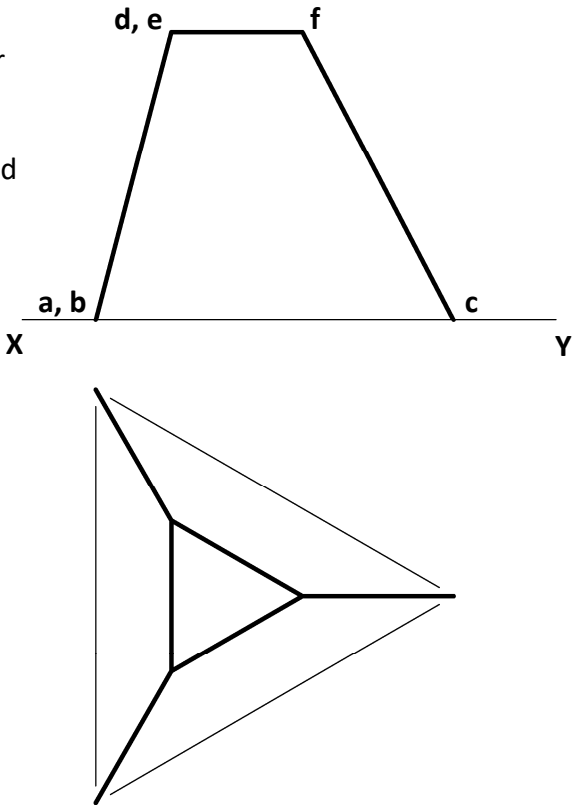
- (b) Shown opposite is a drawing of a science beaker. The outline of a similar beaker is shown below.
- (i) Divide the line AB into 5 equal parts to complete the measuring scale on the beaker.
- (ii) Draw a horizontal line to indicate a level of 400 ml of liquid in the beaker. Colour or shade the liquid.
- Show all constructions clearly.



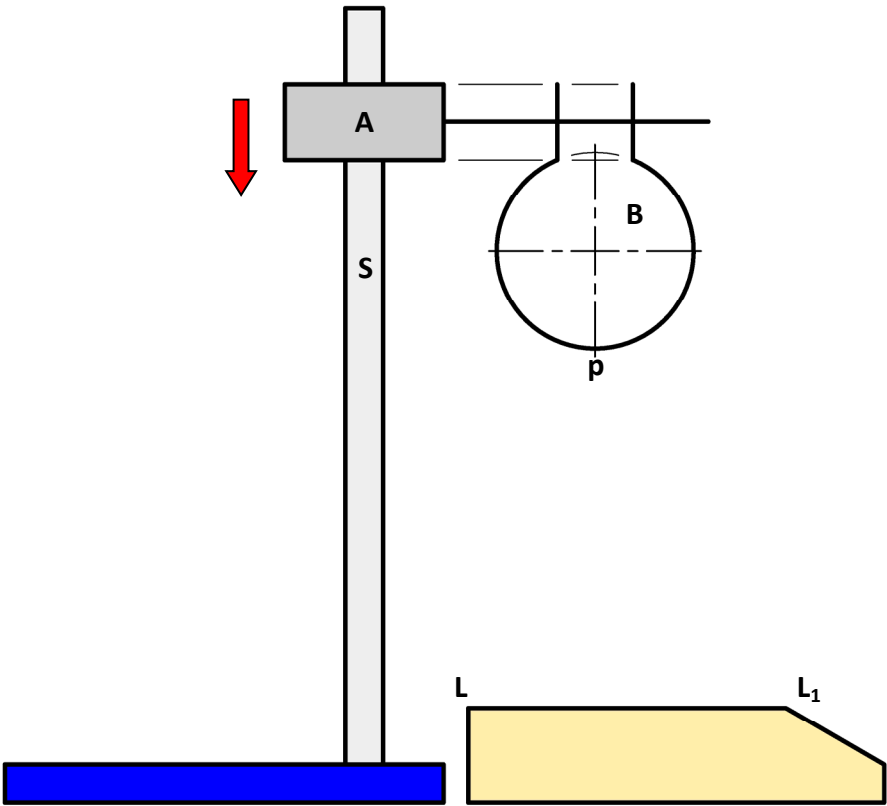
- (c) The image below shows a tripod stand. Shown across is the elevation and plan of a similar tripod stand.
- The tripod is based on a truncated triangular based pyramid.

- (i) Complete the indexing of the plan from the given elevation.
- (ii) In elevation, which leg of the tripod stand is seen as a true length?

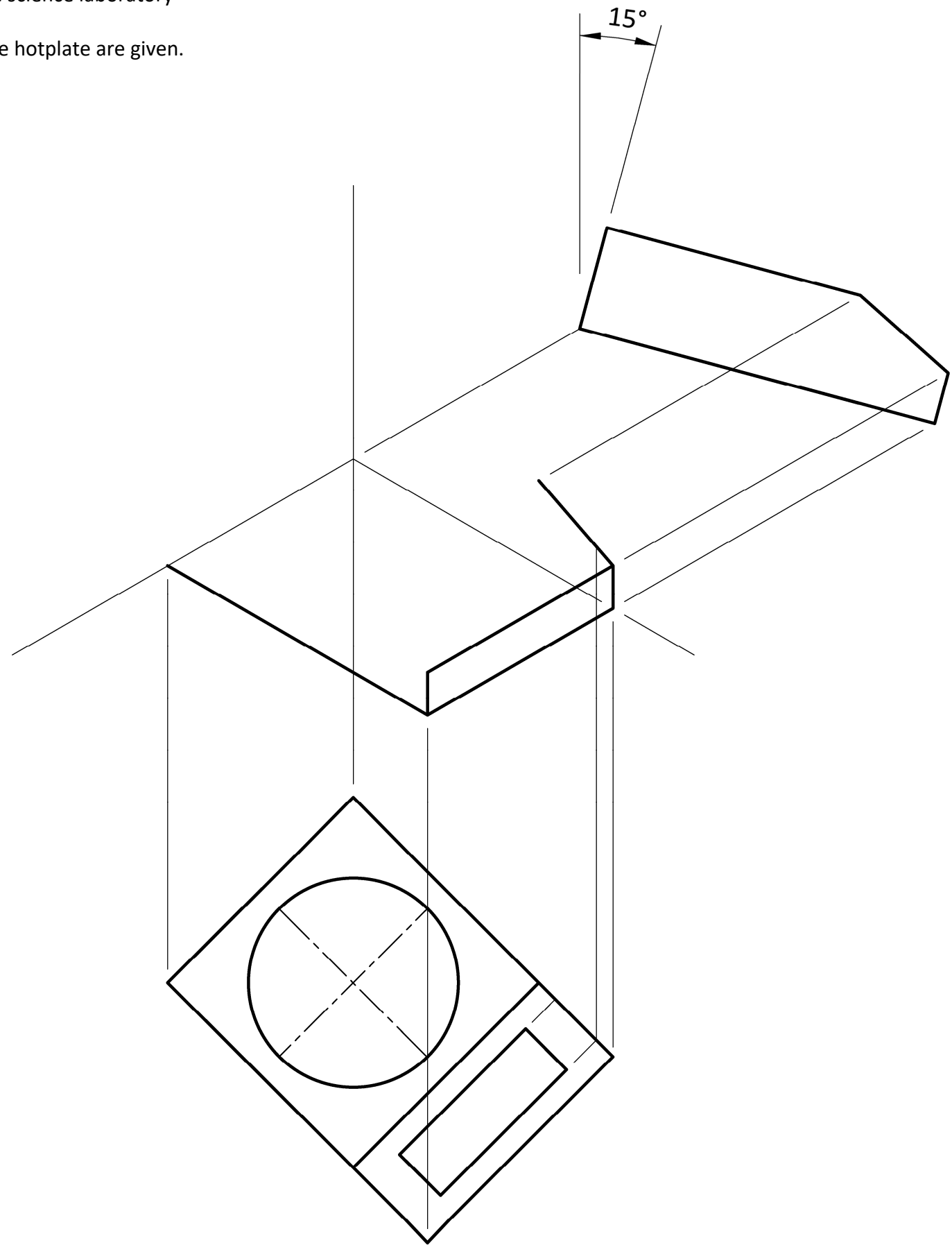
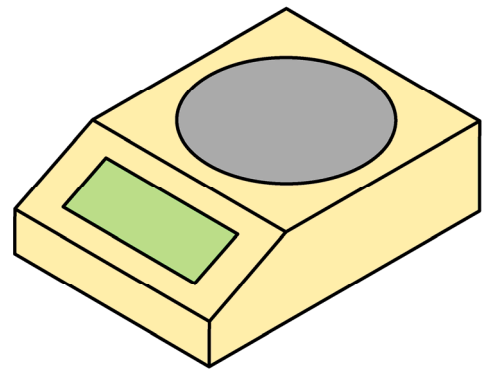
Leg =

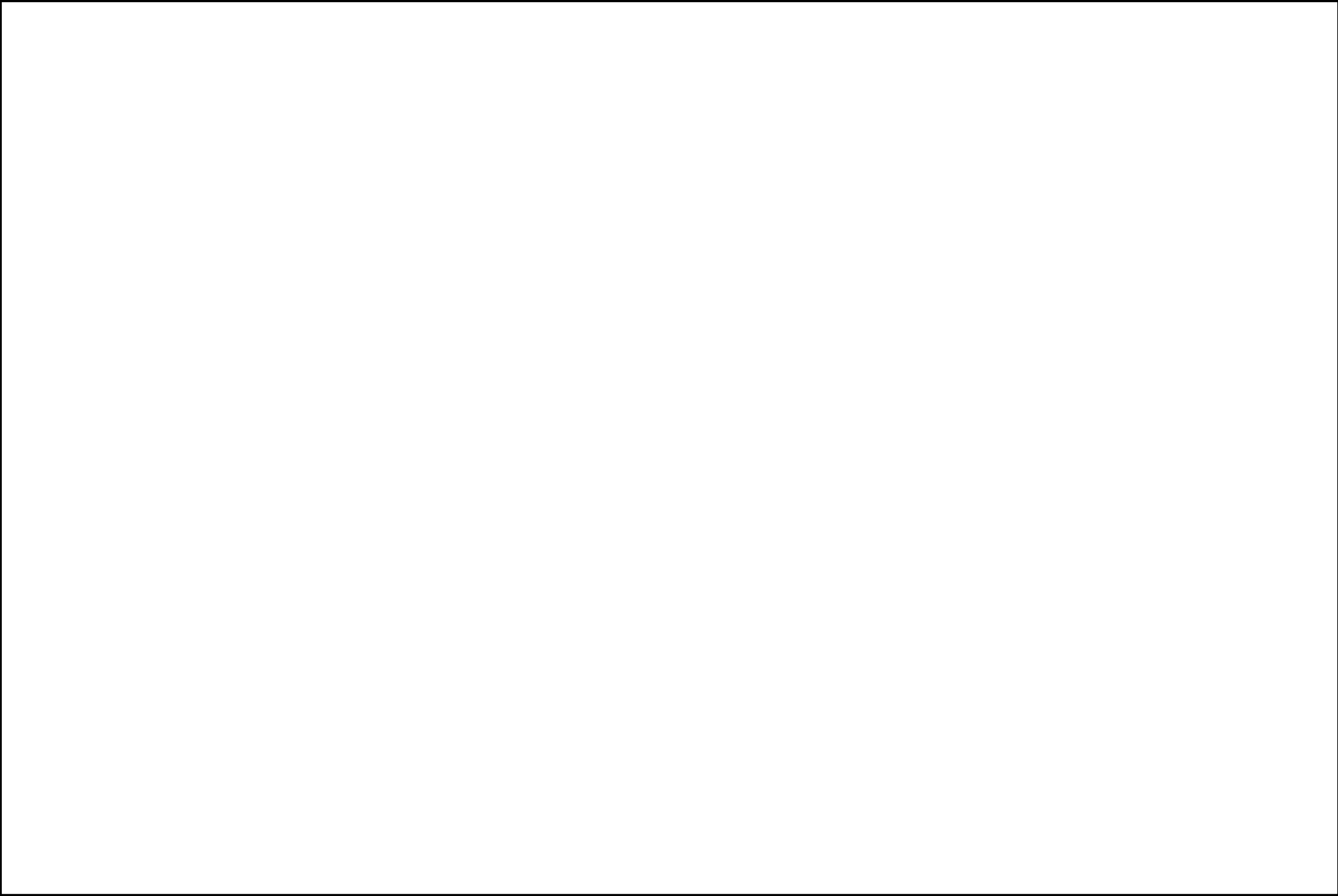


- (d) Shown below is a drawing of a retort stand, round bottomed flask, and a hot plate.
- The arm A moves down along the stand S until point P on the flask B reaches the top of the hot plate, and touches line LL_1 .
- Redraw the arm A , and flask B , in their new positions.



(e) The axonometric axes required for the isometric projection of the science laboratory hotplate are shown.
The elevation, plan, and incomplete axonometric projection of the hotplate are given.
A 3D graphic of the hotplate is also shown.
Complete the axonometric projection of the hotplate.





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Graphics

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