



Leaving Certificate Examination, 2020

Design & Communication Graphics
Higher Level

Section A (60 marks)

3 Hours

Centre No.

This examination is divided into three sections:

- SECTION A (Core - Short Questions)
SECTION B (Core - Long Questions)
SECTION C (Applied Graphics - Long Questions)

- SECTION A**
- Four questions are presented.
 - Answer **any three** on the A3 sheet overleaf.
 - All questions in Section A carry **20 marks** each.

- SECTION B**
- Three questions are presented.
 - Answer **any two** on drawing paper.
 - All questions in Section B carry **45 marks** each.

- SECTION C**
- Five questions are presented.
 - Answer **any two** (i.e. the options you have studied) on drawing paper.
 - All questions in Section C carry **45 marks** each.

General Instructions:

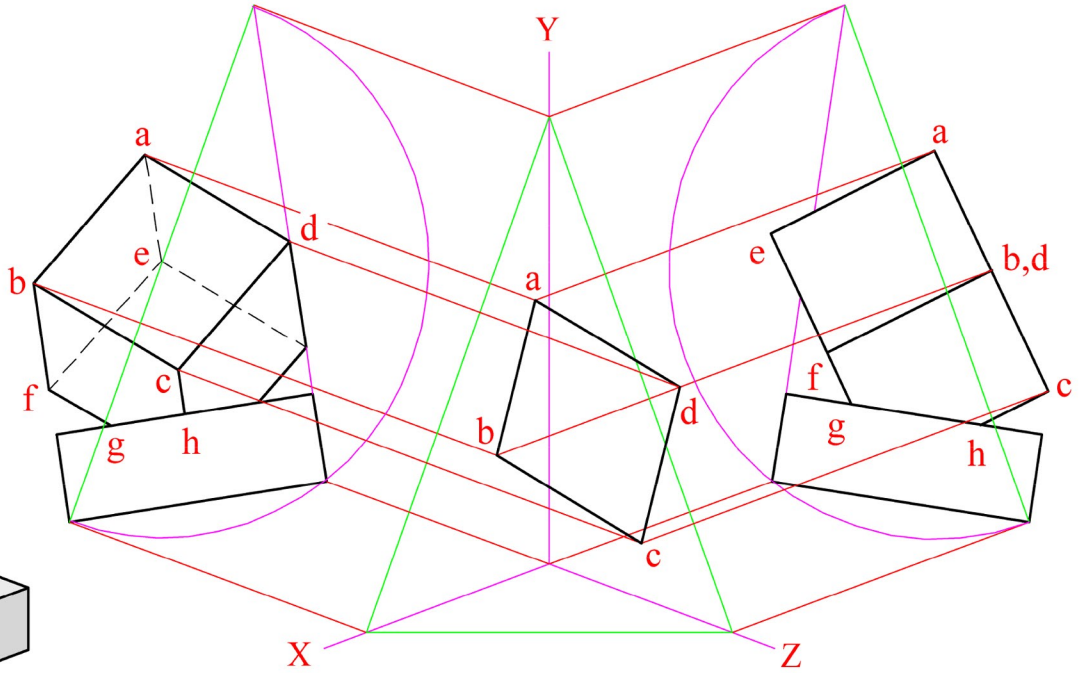
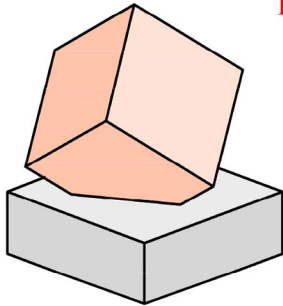
- *Construction lines must be shown on all solutions.*
- *Write the question number distinctly on the answer paper in Sections B and C.*
- *Work on one side of the drawing paper only.*
- *All dimensions are given in metres or millimetres.*
- *Write your Examination number in the box below and on all other sheets used.*

Examination Number

A-1. The image below shows a paperweight. It consists of a cube and a square prism which intersect each other. The drawing shows an incomplete dimetric projection of the paperweight. A pictorial view is also shown.

(a) Complete the dimetric projection of the paper weight.

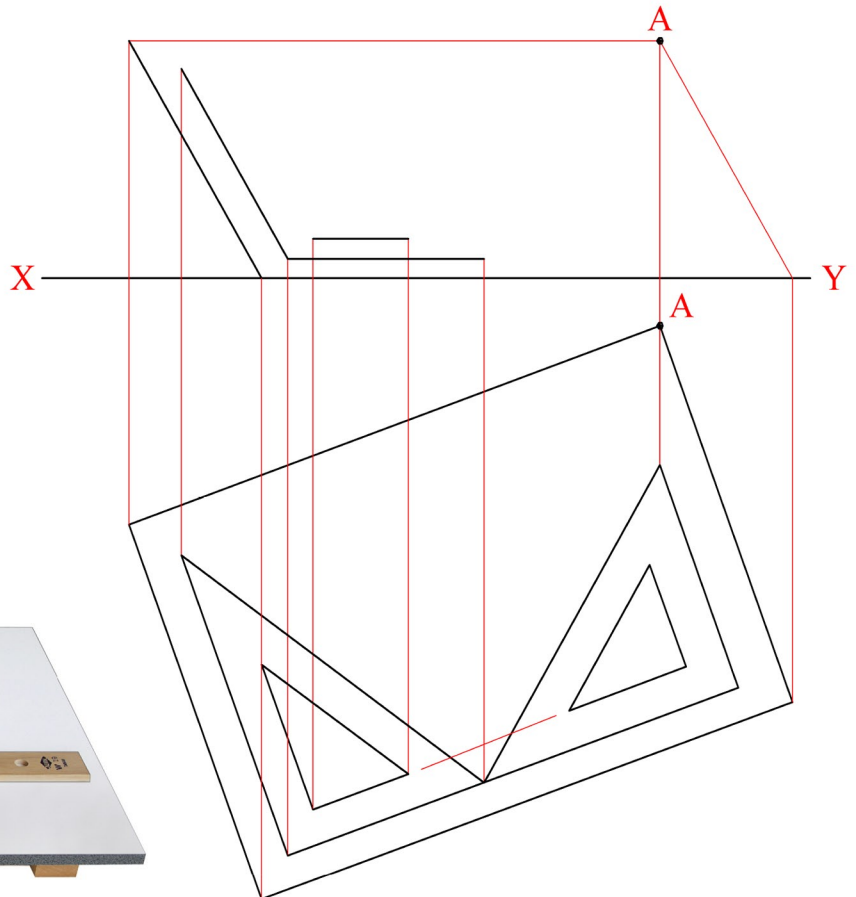
(b) Determine, and indicate in degrees, the true angle between the surface **abcd** and the horizontal plane.



A-2. The image below shows a drawing board and two set squares. The drawing on the right shows the plan and incomplete elevation of a similar drawing board with a $30^\circ/60^\circ$ set square and also a 45° set square.

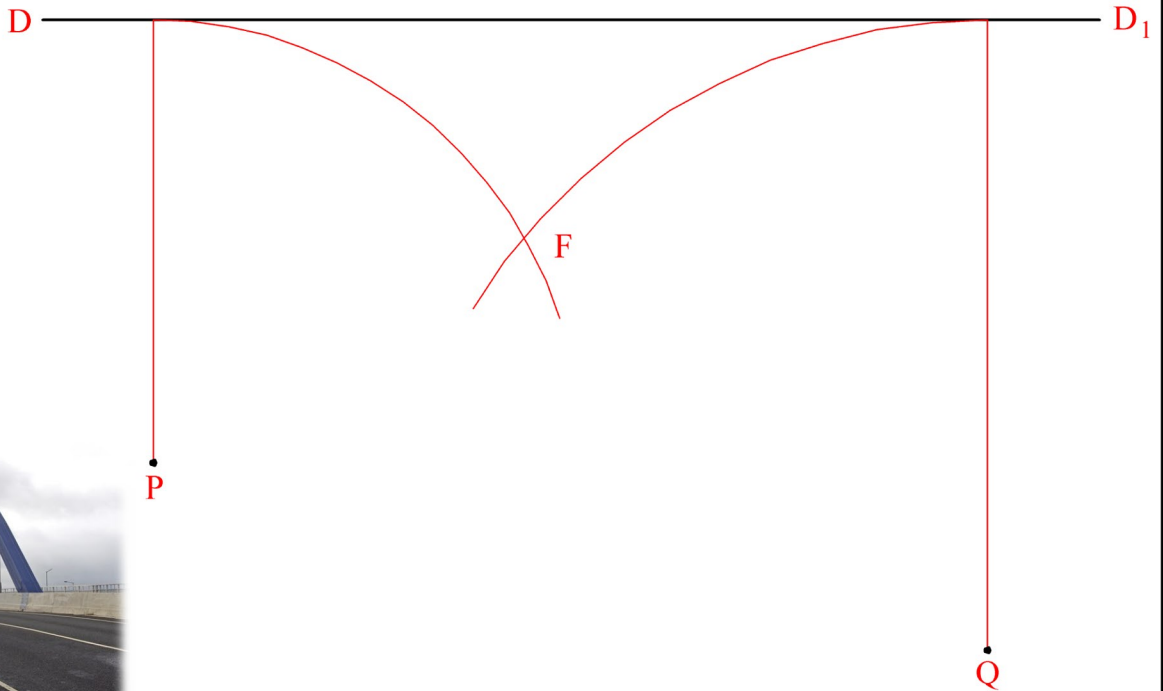
(a) Complete the elevation of the drawing board and the two set squares.

(b) A line from point **A** is drawn on the surface of the board. The line has a true length of 50mm and makes a true angle of 45° with the bottom edge of the board. Draw the projections of this line.



A-3. The image below shows a parabolic bridge at the M50 interchange in Dublin. The drawing shows the directrix DD_1 the focus F and two points P and Q on a similar parabola.

- Locate the axis and the vertex and draw a portion of the parabolic curve which shall pass through P and Q .
- Construct a normal to the curve at the point P .



A-4. The image below shows a fragrance bottle and diffuser reeds. The given elevation and plan show two similar reeds represented by the skew lines AB and CD .

- Determine the projections of the shortest horizontal line between the skew lines.
- Determine the true length of a line joining A to C .

