AN ROINN OIDEACHAIS.

AN BRAINSE GAIRM-OIDEACHAIS.

CERTIFICATE EXAMINATIONS
for
DAY VOCATIONAL COURSES, 1954.

MECHANICAL DRAWING.

Wednesday, June 23rd—10 *a.m. to* 12.30 *p.m.*

INSTRUCTIONS.

1. *Either* 1A *or* 1B *of the first question in Section A is compulsory.*

If 1B is selected, the sketching must be done on the squared paper provided.

2. *Not more* than *four* questions may be attempted, *two* of these must be selected from *Section A* and *two* selected from *Section B*. Draw questions from Section A on one sheet of paper, and questions from Section B on a *separate* sheet.

3. A maximum of *ten* marks will be awarded for accuracy and neatness of arrangement.

4. The number of the question must be distinctly marked by the side of each answer.

5. Work on one side of the paper only.

6. Examination Number must be distinctly marked on *each* sheet of drawing paper.

[P.T.O.

SECTION A.

1A. The Figure 1A represents a "Halving Joint." Make a fully dimensioned workshop drawing, giving a Front Elevation, Plan and End View of the assembled joint.

[25 marks.]

Or,

1B. The Figure 1B represents a "Metalwork Exercise."

Make a *freehand* dimensioned workshop sketch, giving a Front Elevation, Plan and End View of the object in *good proportion*. Dimensions sufficient to make the object should be shown. Compasses should not be used.

[25 marks.]

2. Make an Isometric drawing of the object shown in Figure 2.

[25 marks.]

3. Figure 3 shows the elevation and plan of an hexagonal prism and a triangular prism. Draw, *full size*, these two views and also an end elevation looking A.

[25 marks.]

4. Figure 4 shows three views of a moulding. Construct, full size, an Oblique drawing of the moulding from these views.

[25 marks.]

SECTION B.

5. Draw, full size, the outline shown in Figure 5 and show all construction lines clearly.

Measure and insert dimensions A and B.

[Inscribed circles.]

[20 marks.]

6. Construct the scale as shown in Figure 6.

The triangle ABC shows the angle of elevation of the top of a tower AB, measured from a point C, 65 feet away from its base. Construct the triangle using this scale and measure the actual height, H ft., of the tower to the nearest foot.

[Scale drawing.]

[20 marks.]

7. Construct the pattern shown in Figure 7. Measure and mark on the total length L ins. of the pattern.

[Angle of a semi-circle.]

[20 marks.]

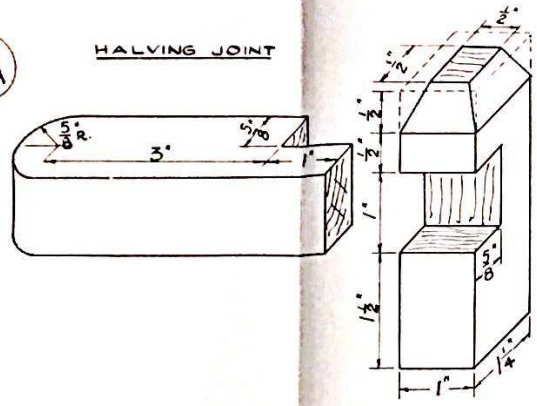
8. On the base line AB, 3 in. long, construct the parallelogram ABCD, having an area of $10\frac{1}{2}$ square inches and one of its angles 130°.

Prove that the four triangles obtained by the intersection of the diagonals are equal in area.

[20 marks.]

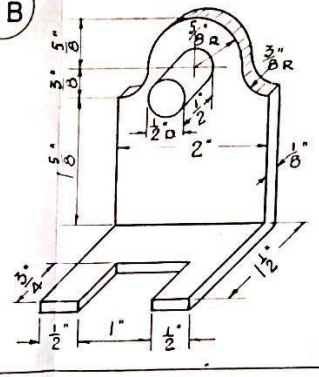
1A

HALVING JOINT



1B

METALWORK EXERCISE



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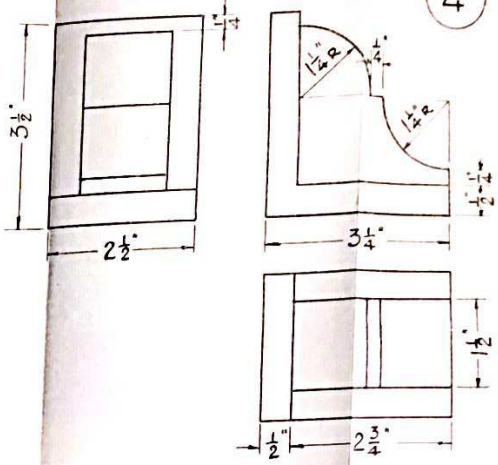

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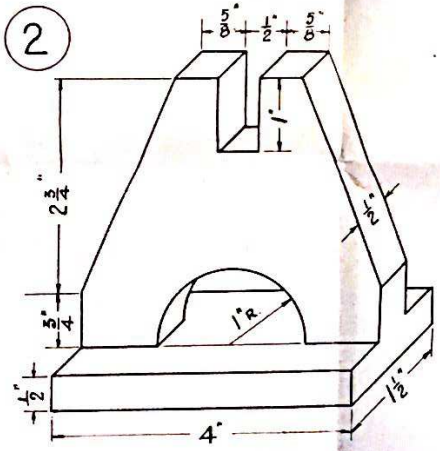

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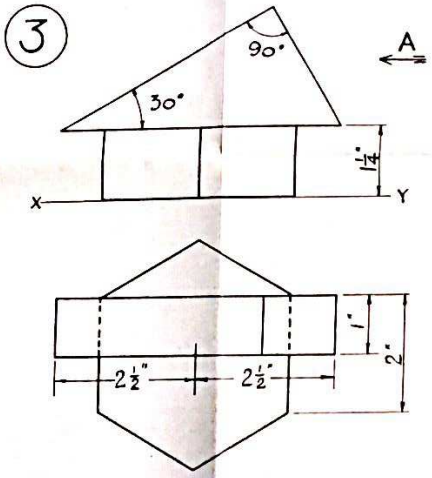

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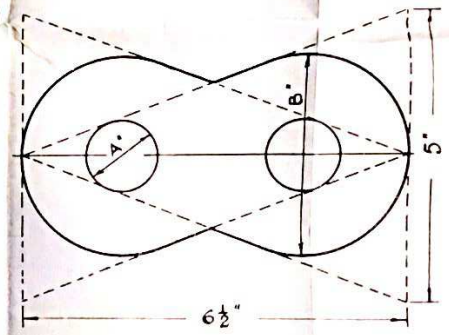

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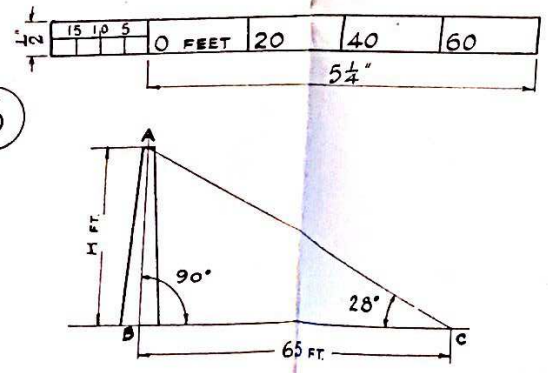

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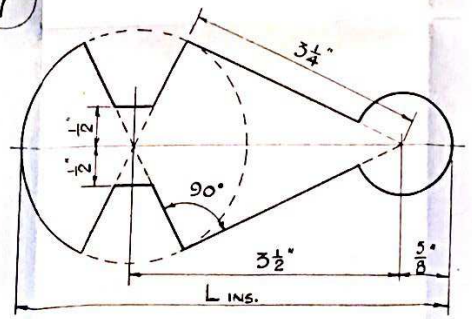

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