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(Department of Education).
BRAINSE AN MHEÁN-OIDEACHAIS.
(Secondary Education Branch).

LEAVING CERTIFICATE EXAMINATION, 1932.

HONOURS.
MECHANICAL DRAWING AND DESIGN.
BOYS AND GIRLS.
TUESDAY, 7th JUNE.—AFTERNOON, 4 TO 6 P.M.

BOYS ONLY.

NOTE.—The use of mathematical instruments, protractors, scales, T- and set squares, and drawing-boards is allowed.

All construction lines must be clearly shown.

The number of the question must be distinctly marked by the side of each answer. Both sides of the paper may be used.

Questions marked (*) have accompanying diagrams.

The number of marks assigned to each question is stated in brackets after the question.

Q. 1. A line 3 inches long on a drawing represents 25 yards. Construct a diagonal scale for the drawing to measure 30 yards and show feet. Using the scale, draw a triangle having its altitude 9 yds. 1 ft., one side 14 yds. 2 ft., and base 12 yds.   [10]

* Q. 2. Copy the diagram of a metal casting for a cover according to the dimensions shown.   [9]

* Q. 3. The diagram shows a key. Draw full size to the dimensions indicated. Determine all points of contact.
[11]

* Q. 4. The plan of a pentagonal pyramid two inches high, resting on its apex, is given.

It is cut by a vertical plane AB as shown on plan. Draw the elevation showing the section.   [9]

* Q. 5. The plan and elevation are given of a clock-case having a cylindrical hole pierced through its centre. Draw the plan and elevation of clock-case when its face makes an angle of 60° with the vertical plane.

Scale 2 inches to 1 foot.   [14]

Q. 6. Make a design to occupy a semi-circle of 6 inches diameter.

The design may be based on Celtic or Floral ornament, and the word **ƀᴀᴎᴄ** in Gaelic letters or the word **BANK** in Roman letters should form an important feature of the design.

Your design should be suitable for reproduction in stone, wood, repoussé metal or bronze. State the material for which your design is intended.   [22]

GIRLS ONLY.

NOTE.—The use of mathematical instruments, protractors, scales, T and set squares, and drawing-boards is allowed.

All construction lines must be clearly shown.

The number of the question must be distinctly marked by the side of each answer. Both sides of the paper may be used.

Questions marked (*) have accompanying diagrams.

The number of marks assigned to each question is stated in brackets after the question.

Q. 1. Divide a line 5 inches long into three parts, in the ratio of 7 : 5 : 3. Construct a triangle whose perimeter equals the full length of the line and whose sides have the stated ratio to each other. [9]

* Q. 2. Show the construction you would employ in setting out the given border.

Not more than two repeats should be drawn. [11]

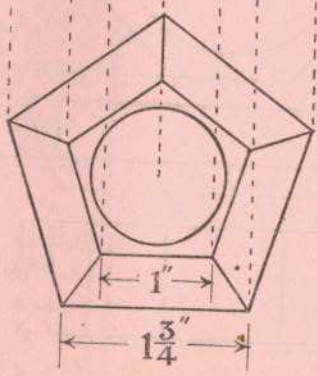* Q. 3. Draw three repeats of the given tile-pattern to the dimension indicated. [8]
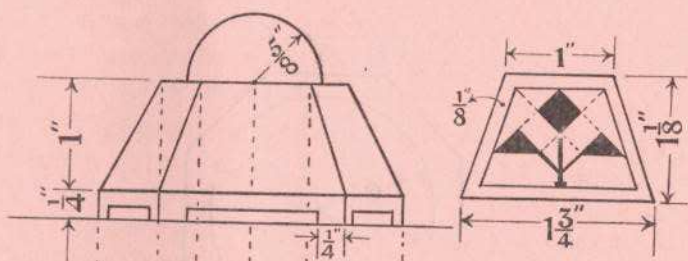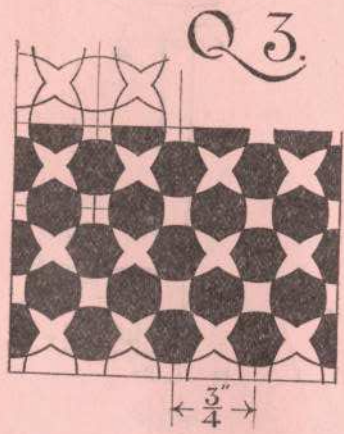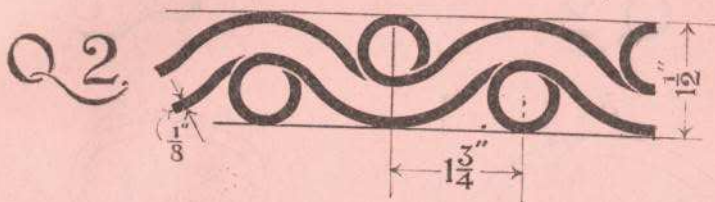
* Q. 4. An embroidered pattern for a table-centre is given. Copy the pattern, making the diameter of the outer circle 3 inches and the bands $\frac{1}{8}$ inch in width. [11]

* Q. 5. The diagram gives the plan and elevation of a pin-cushion and stand.

Draw the plan and elevation and show how you would project the ornament shown on to two of the sloping faces of the stand. The true shape of one sloping face with ornament thereon is given. [14]

Q. 6. Make a design for a border suitable for the title-page of a book, based on Celtic or Floral ornament. The size of the page is to be 5″ × 4″, and the border is to be in proportion to that size. Within the blank space you may insert a title in Gaelic or Roman letters. You may complete $\frac{1}{4}$ of your design in two colours. State the process by which your design could be reproduced. [22]
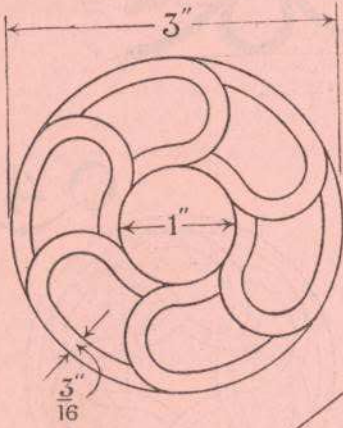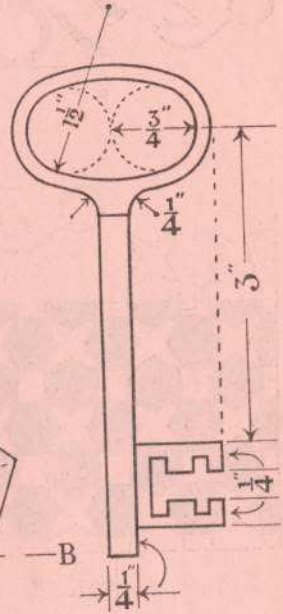
Q 2.

$\frac{1}{8}$"

$1\frac{3}{4}$"

$\frac{1}{12}$"

Q 3.

$\frac{3}{4}$"

Q 4.

$\frac{1}{8}$"

$\frac{3}{8}$"

1"

$\frac{1}{4}$"

$\frac{1}{4}$"

$\frac{1}{8}$"

1"

$\frac{1}{8}$"

$1\frac{3}{4}$"

Q 5.

1"

$1\frac{3}{4}$"

Q2.

Q3.

Q4.

Q5.