

AN ROINN OIDEACHAIS
(Department of Education.)

BRAINNSE AN MHEADHON-OIDEACHAIS
(Secondary Education Branch).

INTERMEDIATE CERTIFICATE EXAMINATION, 1941.

ELEMENTARY MATHEMATICS (Arithmetic).
FOR GIRLS ONLY.

WEDNESDAY, 18th JUNE.—MORNING, 10 A.M TO
11.30 A.M.

Six questions may be answered.

All questions carry equal marks.

Mathematical Tables may be obtained from the Superintendent.

1. What must be added to £21 : 15s. : 10d. × 41 to make £1000?

2. Fill in the blanks in the following bill :

	£	s.	d.
13 lbs. of meat at 1s. 10d. per lb. =			
5 dozen toys at 4 toys for 7d. =			
10 balls ats.d. each =	1	7	11
.... caps at 4s. 9d. each =	3	6	6
∴ Total =			

3. Express in simplest form the value of

$$\left\{ \left(4\frac{1}{2}\right)^2 - \left(4\frac{1}{2} \times 1\frac{1}{5}\right) - 6\left(1\frac{1}{5}\right)^2 \right\} \div \left\{ 4\frac{1}{2} - 1\frac{1}{5} \times 3 \right\}.$$
4. (i) Evaluate 55% of £18 17s. 6d. ;
 (ii) Express £15 18s. 9d. as a percentage of £18, correct to *one place* of decimals.
5. A *metre* = 39·37 inches and a *kilometre* = 1000 metres. Find in yards, correct to the nearest yard, the difference between 8 kilometres and 5 miles.
6. Three sums of money were invested at Simple Interest as follows: £320 at 4% per annum, £480 at 3 $\frac{3}{4}$ % per annum, £400 at 4 $\frac{1}{2}$ % per annum. Find
 (i) the total Interest on those three sums for one year ;
 (ii) the average rate per cent per annum on the whole amount.
7. The area of a circular field is 1 $\frac{3}{4}$ acres. Find the length of the diameter of the circle in yards, correct to *one place* of decimals. [Acre = 4,840 sq. yards.]
8. A man bought 64 sheep at 55s. each. Four of them died and he sold the remainder at a price which left him a profit of 12 $\frac{1}{2}$ % of the price he paid for the whole lot. At what price per head did he sell them ?
9. A solid metal cylinder is 5 inches high and the diameter of its base is 4 inches. Calculate the volume of the cylinder.
 Assuming that a cubic inch of the metal weighs 2 $\frac{3}{4}$ ounces, find the weight of the cylinder, correct to the nearest ounce. [It may be assumed that $\pi = \frac{22}{7}$.]
10. Toys bought at the rate of 13 for a shilling were sold at the rate of 4 for 5d. Using the same axes and the same scales draw two graphs such that one of them may give the cost price of any number of toys up to 5 dozen and the other may give the selling price of that same number.
 Using your graphs find :
 (i) the profit realised on 54 toys ;
 (ii) how many toys should be sold to yield one shilling profit.