

AN ROINN OIDEACHAIS

(Department of Education.)

INTERMEDIATE CERTIFICATE EXAMINATION, 1945.

ELEMENTARY MATHEMATICS (Arithmetic). FOR GIRLS ONLY.

MONDAY, 18th JUNE.—MORNING, 10 TO 11.30.

Six questions may be answered.

All questions carry equal marks.

Mathematical Tables may be obtained from the Superintendent.

1. Evaluate

(i) $\frac{(13.8 + 4.25) \times 0.051}{0.17}$;

(ii) $(2\frac{1}{7} \times 5\frac{2}{3} - 9\frac{1}{3}) \times 2\frac{1}{6}$.

2. Find the total cost of the following items:— $3\frac{1}{2}$ dozen eggs at 3d. an egg; $1\frac{3}{4}$ stone sugar at 6d. per pound; 100 apples at 3d. each; $2\frac{3}{4}$ lb. of tea at 3s. 4d. per lb.; 3 lb. of bacon at 3s. 2d. per lb.

3. Find the Simple Interest on £350 10s. for 6 years at $3\frac{3}{4}\%$ per annum.

4. (a) What is the least number which is exactly divisible by 799 and by 1457?

(b) What is the G.C.M. of 799×84 and 1457×95 ?

(c) What is the G.C.M. of 799,000 and 145,700?

5. A countryside is represented on a map the scale of which is six inches to the mile. What area (in acres) would be represented by an area of 28.8 square inches on the map?

What area on the map would represent a lake whose area is 800 acres?

6. A man walking at the rate of $2\frac{1}{2}$ miles per hour takes 15 minutes to walk around a rectangular field whose width is $\frac{2}{3}$ of its length. What is the area of the field in acres?

[640 acres=1 sq. mile.]

7. The walls of a room which is 22 ft. long, 18 ft. broad, and 11 ft. 4 in. high are to be papered. The spaces for the door, for two windows and for the fire-place measure $7\frac{1}{2}$ ft. by $4\frac{1}{2}$ ft., 7 ft. by 5 ft., 7 ft. by 5 ft. and 5 ft. by 6 ft. respectively. The part between the picture-rail and the ceiling is 16 in. wide, and is not to be papered. Paper is bought at 7s. 11d. per piece, the piece containing 12 yds. and measuring, when trimmed, 21 in. across. Only complete *pieces* of wallpaper can be bought. Find how much the paper for the room costs.

8. A man lost 6% by selling a horse for £47. What selling price would have given him a profit of 5%?

9. A cylinder is required which is to be 4 ft. high and to contain 100 gallons. What must the length of its internal diameter be? Give your answer to the nearest inch.

[1 cubic foot = 6.228 gallons.]