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(Department of Education).

INTERMEDIATE CERTIFICATE EXAMINATION, 1948.

ELEMENTARY MATHEMATICS (Arithmetic).
FOR GIRLS ONLY.

TUESDAY, 15th JUNE.—Morning, 10 to 12.

Six questions may be answered.

All questions carry equal marks.

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1. Simplify

    (a) $\dfrac{11}{84} + \dfrac{1}{63} - \dfrac{5}{42}$;

    (b) $\dfrac{1\cdot35 \times 5\cdot5}{0\cdot1875}$.

2. Express

    (i) 7s. 1½d. as a decimal of £1 ;

    (ii) 6 cwt. 2 qr. 7 lb. as a decimal of a ton.

3. Find the cost of

    (a) 4 pairs of Nylon stockings at 8s. 11d. per pair,

    (b) 3 dozen fancy buttons at 1s. 11d. each.

    (c) 2½ yards of velvet at 11s. 9d. per yard,

    (d) 3½ lbs. of knitting wool at 1s. 2d. per ounce.

Find also the total cost of the items.

4. Show that a speed of 100 yards in 10 seconds exceeds a speed of 20 miles per hour.   By how much per cent. is it greater ?

5. The inside of a rectangular cistern full of water is 3 feet long, 2 feet wide and 1 ft. 4 in. deep.   How many gallons of water does it contain ?

If 20 gallons are run out, find the depth of water left in the cistern.

   [Take 1 cubic ft.=6¼ gallons.]

6. Calculate the value of $3 + \dfrac{1}{6} - \dfrac{1}{6 \times 36}$ to 4 decimal places and find to how many decimal places it is accurate as an approximation to the square root of 10.

7. The following table gives the distance approximately that a body has fallen after a given number of seconds :

Time in secs.	0	1	2	3	4	5
Distance in feet	0	15	65	145	255	400

Draw a graph showing the relation between distance and time, and from your graph read off

    (i) the distance the body has fallen after $3\frac{1}{2}$ secs.

    (ii) the time the body took to fall 100 feet.

8. Find the area of a path 5 feet wide round a circular pond of diameter 50 feet. [Answer to the nearest square foot.]

Or

Find the total surface area, to the nearest square inch, of a cylinder whose height is 3 inches and whose diameter is 4 inches.