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(Department of Education).

INTERMEDIATE CERTIFICATE EXAMINATION, 1956.

ELEMENTARY MATHEMATICS (Algebra).

FOR GIRLS ONLY.

MONDAY, 11th JUNE.—MORNING, 10 TO 12.

All questions to be answered.

All questions carry equal marks.

1. Solve the equations :

(i) $6(3x-5)+4x+1=3[x-3(x-3)]$;

(ii) $6x+y=13$.
 $5x+2y=5$.

2. Joan has four times as many toys as Mary. If Joan were to give one of her toys to Mary she would then have three times as many toys as Mary. How many toys has each of the two girls ?

3. (a) Factorise :

(i) $x^2-10x-56$;

(ii) $2ac-bc+2bd-4ad$.

(b) Show that $(x+1)^2-(x-1)^2=4x$, and find the value of 799^2-797^2 .

4. Find, correct to one place of decimals, the values of x which satisfy the equation $2x^2-6x=9$.

5. (i) If $y=\frac{x-2}{2x-3}$, express x in terms of y .

(ii) If l lb. of tea at x pence per lb. are mixed with m lb. of tea at y pence per pound, find an expression in pence for the cost of one pound of the mixture.

6. Find the values of the expression x^2-2 when $x=3, 2\frac{1}{2}, 2, 1\frac{1}{2}, 1, \frac{1}{2}, 0, -\frac{1}{2}, -1, -1\frac{1}{2}, -2, -2\frac{1}{2}, -3$.

Draw the graph of x^2-2 using these values.

Find from your graph, as accurately as you can, the values of x for which the expression is equal to (i) 0, (ii) $1\frac{1}{2}$.