INTERMEDIATE CERTIFICATE EXAMINATION, 1964.

ELEMENTARY MATHEMATICS (ALGEBRA).

FOR GIRLS ONLY.

TUESDAY, 9th JUNE — Morning, 10 to 12.

All questions to be answered.

All questions carry equal marks.

1. Solve the equation $\frac{1}{3}(2x + 1) - \frac{3}{4}(x - 2) = 2$.

2. (i) Find the product of $x - 1$ and $2x - 3$.

   By how much does this product exceed $2x^2$ when $x = \frac{1}{8}$?

   (ii) For what values of x does $2x - 1$ exceed 3 ?

3. (i) Factorise $a^2 + 3a + 2$.

   (ii) Find the value of $$\frac{2a^3 - a^2 - 3a}{a^3 + 3a^2 + 2a}$$

   when $a = 7$.

4. (i) If $x + 2y = 5$

      and $2x - 11y = -5$,

         show that $x = 3y$.

   (ii) Write down a value of x that satisfies the equation

   $2x^2 - 3x = 2(21)^2 - 3(21)$.

   Find the other value of x that satisfies the equation.

5. A girl spent 10s. 6d. in buying silk ribbon at 9d. per yard and cotton ribbon at 2d. per yard.   If she had bought half as much of the silk ribbon and three times as much of the cotton ribbon she would have spent 12s. 9d.   How many yards of each kind of ribbon did she buy ?

6. Plot the graph of $x^2 - x - 3$ for values of x from $x = -3$ to $x = +3$.

   Find from your graph, as accurately as you can,

      (i) the values of x for which $x^2 - x - 3 = 0$,

      (ii) the value of $x^2 - x - 3$ when $x = -2 \cdot 6$.