AN ROINN OIDEACHAIS

(Department of Education).

INTERMEDIATE CERTIFICATE EXAMINATION, 1953.

ELEMENTARY MATHEMATICS (Algebra).

FOR GIRLS ONLY.

MONDAY, 15th JUNE.—MORNING, 10 TO 12.

All questions to be answered.

All questions carry equal marks.

---

1. Multiply $x^2-7x+12$ by $x-5$ and find the value of the product when (*a*) $x=2$, (*b*) $x=0$, and (*c*) $x=-1$.

2. Factorise :—(*a*) x^2-x-12 ;

(*b*) $(a+2b)^2-9c^2$;

(*c*) $3a^2-ab+bc-3ca$.

3. Solve the following equations :—

(*a*) $x-4(3x-5)+6(x-2)=5x-12$;

(*b*) $3x+2y=11$.
$4x-3y=26$.

4. Find, correct to two places of decimals, the values of x that satisfy the equation $2x^2-4x-13=0$.

5. A girl bought a certain number of apples at 3d. each and a certain number of oranges at $3\frac{1}{2}$d. each at a total cost of 5s. $2\frac{1}{2}$d. Had each apple cost a penny less and each orange a halfpenny more, she would have spent 5s.
How many apples and how many oranges did she buy ?

6. Using the same axes and the same scales, draw the graphs $y=x^2-1$ and $y=x+3$ for values of x from $x=-3$ to $x=+3$.
Find from your graphs, as accurately as you can, the values of x for which x^2-1 is equal to $x+3$.