

June 30th, 1922.

No. 8.

COMMON EXAMINATION FOR
ENTRANCE TO PUBLIC SCHOOLS.

SUBJECT.—**ALGEBRA.**

[45 minutes.]

[Do A and B, or B and C, as you have been instructed.]

- A {
- I. Divide $12x^5y^2 - 9x^3y$ by $-3x^2y$.
 - II. Solve the equation $3(x+1)+6=1-4(x-2)$.
 - III. In a triangle, $\angle A$ is 3 times $\angle B$, and $\angle C$ is twice $\angle A$. Find $\angle A$.
- B {
- IV. Simplify $\frac{x}{2a} - 2\left(\frac{2x}{a} - \frac{3x}{4a}\right)$.
 - V. Solve $\begin{cases} y=2x-3 \\ 2y=4-x \end{cases}$.
 - VI. 5 dozen eggs and 6lb. of butter cost 19/-, while 3 dozen eggs and 7lb. of butter cost 16/6. Find the price of a lb. of butter.
 - VII. Factorize :—
 - (i) $(3a+2b)^2 - (2b-a)^2$.
 - (ii) $7x^2 + 25x - 12$.
- C {
- VIII. Solve the equation $x^2 - 4 = 4x$.
 - IX. Simplify $\frac{2a}{a-b} + \frac{a^2+b^2}{b^2-a^2} - \frac{2b}{a+b}$.
 - X. A certain family consists of 2 parents and n children. Each member of the family presents an Easter egg to each other member. How many eggs does each one give? The parents buy 4d. eggs and the children 2d. eggs. Altogether 9/- is spent. How many children are there?

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