

June 16th, 1941.

No. 6.

COMMON EXAMINATION FOR
ENTRANCE TO PUBLIC SCHOOLS AND
ROYAL NAVAL COLLEGE, DARTMOUTH.

SUBJECT—ARITHMETIC.

[60 minutes.]

[N.B.—All boys MUST do A before going on to B, but are recommended to do as much as they can of B.]

Dartmouth Candidates must attempt both parts of the paper.

A.

I. Divide 6951646 by 4082.

II. Multiply 2yd. 1ft. 7in. by 24.

III. (i) Multiply $60\cdot25$ by $0\cdot064$.

(ii) Divide $0\cdot06042$ by $0\cdot057$.

IV. Simplify $2\frac{1}{2} - 1\frac{1}{2} \div 1\frac{1}{3}$.

V. Express 4s. $7\frac{3}{4}d.$ as a decimal of £1 correct to four places of decimals.

VI. 30 miles per hour is the same speed as 44 feet per second. Do not prove this, but use it to express a speed of 55 feet per second in miles per hour.

[P. T. O.]

B.

[*Begin a new sheet.*]

VII. (i) What is $2\frac{1}{2}$ per cent. of £30 ?

(ii) A boy gets 39 marks out of a total of 60. Express his marks as a percentage of the total.

VIII. A rectangular garden plot, 20 yards long and 22 feet wide, is surrounded by a solid wooden fence, 6 feet high. What is the area in sq. feet of the inner face of the fence? Find also, to the nearest penny, the cost of tarring the fence inside and outside at 2 pence per sq. yard. Neglect the thickness of the fence.

IX. A cylindrical tank, 7 feet in diameter and 10 feet high, is being filled by a pipe which delivers 100 gallons a minute. How long, to the nearest minute, will it take to fill the tank, if at first empty?

[Take $\pi = \frac{22}{7}$; 1 cu. foot = $6\frac{1}{4}$ gallons.]

X. Given that 1 gallon = 4.546 litres, express one litre in pints correct to three significant figures.

XI. A man used to spend 10 shillings a week on cigarettes. The price of the cigarettes has now risen by 25 per cent., and he now buys 10 per cent. fewer cigarettes each week. What is (i) the percentage increase, (ii) the actual increase, in his weekly expenditure on cigarettes?