

EXTERNAL PAPER

S.2 MATHAMATICS

TIME: 2HRS

INSTRUCTIONS:-

➤ **Attempt all questions**

1. Solve the equation

$$\frac{3x}{2} - 2\frac{(x-3)}{3} + 4 = 0$$

2. Find the solution of the inequality and illustrate the solution on a number line

$$-7 < 3x12 \leq 5$$

3. Given that $A*t = 2s^2 = 2s^2 - 3t$, evaluate $6*(5*2)$

4. Simplify; $(3\frac{5}{6} \div 2\frac{2}{15}) \times \frac{3}{23}$

$$5\frac{1}{3} - 2\frac{7}{12}$$

5. In a class of 15 students, 7 like mathematics, 9 like English and 2 like neither mathematics nor English. Find the number of students who like both mathematics and English.

6. Simplify $\log 15 - 2\log 10 + \log 60$.

7. If $25n = 8t$ en, find n.

8. Evaluate $(0.25)^2 \times (\frac{1}{64})^2$

$$(128)^{-2}$$

9. Find the H.C.F of 18,45 and 42.

10. Solve a pair of simultaneous equations

$$2x - y = 8$$

$$4x - 3y = 14$$

1. Using a pencil a rule and pair of compasses only, construct triangle ABC in which $AB = 9\text{cm}$ Angle $CAB = 45^\circ$ and $ABC = 75^\circ$.
 - (a) Measure the length BC
 - (b) Draw a circumscribing circle through the points A, B and C.
 - (c) Measure radius of the circle.
2. The height of a boy was measured every month for a year. These are the results

| Month | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|--------|-----|-----|-------|-------|-----|------|------|-----|------|-----|-----|-----|
| Height | 158 | 160 | 161 | 164 | 165 | 166 | 166 | 166 | 167 | 169 | 169 | 170 |

Draw a line graph to show the rate at which the boy's height changed over the year.

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