

SUBJECT: MATHEMETICS

NAME: _____

ASSESSMENT EXERCISE FOR SENIOR SECONDARY CLASS

Attempt all the following questions

1. If $134_n = 54_{\text{eight}}$. calculate n.
2. If $231_{\text{four}} \times 10101_{\text{two}} = M_{\text{six}}$, find the value of M.
3. Convert 101.011_{two} to base ten.
4. Evaluate $\frac{1\frac{1}{4} + 1\frac{1}{2}}{5\frac{1}{8} - 3\frac{3}{4}}$
5. Arrange $\frac{3}{4}$, $\frac{2}{3}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{5}{12}$ in ascending order of magnitude.
6. Express 0.006457 to 3 s.f
7. Express 245.7 in standard form
8. Simplify $6.04 \times 10^8 + 2.63 \times 10^7$
9. In a certain class, the ratio of boys to girls is 2:5. If there are 40 boys,
how many girls are there?
10. Decrease #121.10 by 4:7
11. If 14 workers can cultivate 42 acres of land in 18 weeks, how long will
21 workers cultivate 56 acres of land working at the same rate?

12. A firm produced 2975 articles in the year 2024 and 3500 article the following year, what is the percentage increase?

13. A rope length 15cm was measured by a girl to be 14.4cn. Find the percentage error.

14. Evaluate $\sqrt{32} + 3\sqrt{8}$

15. Simplify $\frac{2}{5\sqrt{3}}$

16. Evaluate $27^{-\frac{2}{3}}$

17. Evaluate $2a^2 \times 4a^3$

18. Find the value of x if $27^{x+2} = 9^{2x}$

19. Evaluate using log table 92.63×2.914 (Answer to 1 d.p)

20. Write out the member of the following set

$$\{x: x \in \mathbb{N}, x \leq 10\}$$