

MAKUENI BOYS HIGH SCHOOL
APRIL HOLIDAY ASSIGNMENT
MATHEMATICS FORM 3 -2020

1. given that the product of the matrices $\begin{pmatrix} 2 & 0 \\ 1 & x \end{pmatrix}$ and $\begin{pmatrix} x & x+2 \\ 3 & 2 \end{pmatrix}$ is a singular matrix.

Find the value of x.

2. make x the subject of the formula $y = \frac{1}{mp} \sqrt{\frac{ax-b}{x+4}}$

3. Given that $\log_{10} 3 = P$ express the following in terms of P. $\text{Log}\left(\frac{10}{3}\right) - \text{Log}\left(\frac{1}{27}\right) + \text{Log}81$

4. A quantity s is partly constant and partly varies inversely as t? Given that S=5 when t=2 and S = 3.5 when t=4. Write down an equation connecting S and t.

5. Calculate the time taken to sh 40,000 to accumulate to sh.47, 840 at compound interest rate of 12% p.a if compounding is done monthly.

6. Given that P =28.4 and Q=5.0. Calculate the percentage error in $\frac{P}{Q}$.

7. Factorize $x^2 - y^2$. Hence evaluate $8645^2 - 8635^2$

8. Explain $(2-2x)$ hence estimate the value of $(1.98)^4$ correct to 3 decimal places.