

Maths Form 2

1. Given $a:b = 2:3$ and $b:c = 4:8$ find $a:b:c$.

(2 marks)

2. Using mathematical tables to find;

$$0.0912^3$$

(2 marks)

3. Solve for x in the equation.

$$27^x \times 3^{(2x-2)} = 9^{(x+2)}$$

(3 marks)

4. Simplify:

$$\frac{512^{\frac{4}{3}} \times 27^{\frac{-2}{3}}}{128^2 \times 9^{-2}}$$

(4 marks)

5. Use logarithms to 4 decimal places to evaluate:

(4 marks)

$$\left(\frac{0.7841 \times \sqrt{0.1356}}{84.92} \right)^{\frac{1}{3}}$$

6. Use squares, square roots and reciprocals tables only to evaluate;

$$\frac{3}{\sqrt{42.15}} + \frac{4}{(3.152)^2}$$

(4 marks)

7. Find the equation of a line through point $(5, -1)$ and perpendicular to line $4x + 2y - 3 = 0$.
(4 marks)

8. Four towns **P**, **Q**, **R**, and **S** are such that the town **Q** is 120 Km due to East of town **P**.
Town **R** is 160km due north of town **Q**, town **S** is on a bearing of 330° from **Q** and on a bearing of 300° from **R**.

- a) Show the relative position of towns **P**, **Q**, **R**, and **S**.

Take the scale of 1cm to rep. 50km.

(5mks)

b) Use the drawing to determine

i) The distance **SP** in Km

(2mks)

ii) The bearing of **S** from **P**

(1mk)