**Maths Form 2 ANSWERS**

1. Given a:b = 2:3 and b:c = 4:8 find a:b:c. (2 marks)

***a:b:c***

***(2:3)4***

 ***(4:8)3 m1***

***8:12:24***

***2:3:6 A1***

1. Using mathematical tables to find;

***0.09123 (2 marks)***

***(9.123 x 10-2)3***

***758.6 x 10-6***

***7.586 x 10-4***

1. Solve for x in the equation.

27x x 3(2x-2) = 9 (x +2)  ( 3 marks )

 ***33x x 3 (2x – 2) = 3 2(x + 2 )  M1 expressing in index form***

 ***3x + 2x – 2 = 2x + 4 M1 relating index***

 ***3x = 6***

 ***x = 2 A1 C.A.O***

1. Simplify:  (4 marks)

** ***M1***

 *** M1***

 *** A1***

1. Use logarithms to 4 decimal places to evaluate: (4 marks)

 

|  |  |  |
| --- | --- | --- |
| ***No*** | ***Std form*** | ***Log*** |
| ***0.7841******√0.1356******Log84.92(1.9290)*** | ***7.841 x 10-1******1.356 x 10-1******1.929 x 100******5.310 x 10-1*** | ***1.8944******1.1323 x ½ +******1.5662******1.4606*** ***0. 2853 -******1.1753 x 1/3*** ***1.7251*** |

***=0.5310***

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

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

$\sqrt{42.15}=6.4923$

***3.1522 = 9.9351***

$\frac{3}{6.4923 }+ \frac{4}{9.9351}$

***3 x 0.1540 + 4 x 0.1007***

***0.462 + 0.4028***

 ***= 0.8648***

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

 ***4x + 2y = 3***

***2y = -4x + 3***

***y = -2x +*** $\frac{3}{2}$

***Gradient (m1) = -2***

***m1 x m2 = -1***

***-2 x*** $x$ ***= -1***

$x= \frac{-1}{-2}=\frac{1}{2}$

***(x, y) (5, -1)***

$\frac{y--1}{x-5}=\frac{1}{2}$

***y + 1 = ½ (x – 5)***

***y =*** $\frac{1}{2}x-\frac{5}{2}-\frac{1}{1}$

***y =*** $\frac{1}{2}x-3\frac{1}{2}$

1. 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 3300 from **Q** and on a bearing of 3000 from **R**.
2. Show the relative position of towns **P**, **Q**, **R**, and **S**.

Take the scale of 1cm to rep. 50km. (5mks)

***drawing***

1. Use the drawing to determine
2. The distance **SP** in Km (2mks)

 ***i) 4.9 x 50 = 245 Km M1A1***

1. The bearing of **S** from **P** (1mk)

 ***356 B1***