Gatitu secondary school

Maths tune up 2015 form 3

Name... admno.........................

1. Find the value of x in the following equations:
$$49^{x+1} + 7^{2x} = 350$$
(4 marks)

2. Solve for x in the equation $\dfrac{81^{w} \times 27^{y}}{9^{y}} = 729$ 3 MRKS

3. Simplify $\dfrac{27^{\frac{1}{1}} + 2^{4}}{32^{-\frac{3}{5}}}$ (3mks

4. Evaluate
$$\frac{-8 \div 2 + 12x\ 9\text{-}4\ x\ 6}{56 \div 7\ x\ 2}$$
3mks

5.

2. Express the numbers 1470 and 7056, each as a product of its prime factors

Hence evaluate $\dfrac{1470^2}{\sqrt{7056}}$ Leaving the answer in prime form

(3 marks)

6.

The equation of a line is
$$-^3/_5x + 3y = 6$$

Find the:
(a)   Gradient of the line   1MRKS

(b)   Equation of a line passing through point (1,2) and perpendicular to the
       given line.   3MRKS

7.

.   A manufacturer sells bottle of fruit juice to a trader at a profit of 40%. The trader sells it
     for Kshs 84 at a profit of 20%. Find
         (a) The trader's buying price **2 mrks**

     (b) The cost of manufacture of one bottle **1 mrk**

8. The marked price of a car in a dealer's shop was Kshs 400,000. Wekesa bought the car at 8% discount. The dealer still made a profit of 15%.
Calculate the amount of money the dealer had paid for the car **3mrks**

9.

1. In fourteen years time, a mother will be twice as old as her son. Four years ago, the sum of their ages was 30 years. Find how old the mother was, when the son was born.
(4 marks)

10.

11. A bus takes 195 minutes to travel a distance of (2x + 30) km at an average speed of (x – 20) km/h
Calculate the actual distance traveled. Give your answers in kilometers.
(3 marks)