

Name:

## QUIZ – MATH GRADE 10

Evaluate or simplify as much as possible:

1. (5%)  $\text{Log}_{\frac{1}{3}}(\sqrt{3}) =$

2. (5%)  $3^{-\log_3(7)} =$

3. (10%)  $\text{Log}_2(36) - \text{Log}_2(6) - \text{Log}_2(3) - \text{Log}_2(3) =$

4. (10%)  $4^{\frac{-\log_4(9)-1}{2}} =$

5. (10%) Solve:  $(\sqrt{5})^{2x+1} = \sqrt{5} \frac{5}{25^{x-1}}$

6. (10%) Solve: Given the following equation:  $2^x = 0.2$

a. (5%) Estimate the solution: \_\_\_\_\_

b. (5%) Write down the exact solution of the equation

7. (18%) Let  $\log_2(5) = x$ ,  $\log_2(3) = y$  Express in terms of  $x$  and  $y$ .

$$\text{Log}_2(60) =$$

$$\text{Log}_2\left(\frac{1}{15\sqrt{2}}\right) =$$

$$\text{Log}_5(9) =$$

8. (16%) Solve the equation:  $\log_3(2x-1) - 2 = \log_3(x-4)$

9. (16%) Solve the equation:  $\log_5(x-1) - 2\log_{25}(x+3) = -1$