Name:

QUIZ – MATH GRADE 11 SL

Evaluate/Simplify

1. (5%) $Log_2(32) =$

2. (5%) $Log_3(\frac{1}{27}) =$

3. (5%) $Log_{\sqrt{3}}(\sqrt{27}) =$

4. (5%) $Log_3(\frac{\sqrt[3]{9}}{\sqrt{3}}) =$

5. (8%)
   $Log_3(36) + Log_3(2) - Log_3(8) =$

6. (7%) $Log(0.1) - Log(0.01) =$

7. (5%) $2^{\log_2(x)-1}$

8. (5%) $2^{2\log_2(3)}$

9. (5%) $Log_5(\ln(\sqrt[5]{e}))$

10. (5%) Solve: $3^{-3x+1} = -2$

11. (5%) Solve: $5^{3x} = \left(\dfrac{1}{25}\right)^{\left(x^2\right)}$

12. (15%) Solve: $Log(\dfrac{x}{10}) + Log(100x) = 1$

13. (10%) Let $\log_{10}P = x$, $\log_{10}Q = y$, $\log_{10}R = z$. Express in terms of x, y and z.

$Log_{10}(\dfrac{\sqrt{Q}}{P})$

$Log_{10}(\dfrac{1}{PR^2})$

14. (15%) Given the equation: $Log_3(\dfrac{x}{2}) - Log_9(x+9) = \dfrac{1}{2}$

    a. (4%) Change the base of the second logarithm to 3.
    b. (4%) Simplify the denominator of the second logarithm after the change of base.
    c. (7%) Solve the equation.