Alg 2 A/PrecA summer 2018 logs Name_____

1. Judith puts $5000 into an investment account with the interest compounded continuously. Which approximate annual rate is needed for the account to grow to $9110 after 30 years? a) 2% b) 2.2% c. 0.02% d. 0.022% 1._____

2. If $ae^{bt} = c, where\ a, b\ and\ c\ are\ positive, then\ t =$ 2._____

1) $\ln \frac{c}{ab}$ 2) $\ln \frac{cb}{a}$ 3) $\frac{\ln \frac{c}{a}}{b}$ 4) $\frac{\ln \frac{c}{a}}{\ln b}$

3. What is the inverse function of f(x) = -6(x – 2)? 3._____

4. What is the inverse function of $f(x) = \frac{x+1}{x-2}$ 4._____

5. What is the solution to $8(2^{x+3}) = 48$? 5._____

1. X = $\frac{\ln 6}{\ln 2} - 3$ 2. X = 0 3. X = $\frac{\ln 48}{\ln 16} - 3$ 4. X= ln 4 – 3

6. Which is the inverse function of $f(x) = log_a x$? 6._____

1. $y = x^3$ 2. $y = log_x 3$ 3. $y = 3^x$ 4. $x = 3^y$

7. If $log_x(x + 1) - log_3 x = 2$, then x = 7._____

1. $-\frac{9}{8}$ 2. $-\frac{6}{5}$ 3. $\frac{1}{8}$ 4. $\frac{1}{5}$

8. The number of bacteria that grow in a petri dish is approximated by the function $G(t) = 500e^{0.216t}$ where t is time in minutes. Use this model to approximate to the **nearest integer,** the number of bacteria present after one half-hour. 8._____

9. If log a = x and log b = y, then log $(ab^2) =$ 9._____

1. $\frac{1}{2}(x + y)$ 2. $x + \frac{1}{2}y$ 3. $x + 2y$ 4. $2x + 2y$

10. Which expression could be used to determine the the value of y in the equation $log_x 8 = y$? 10._____

1. $\frac{\log 8}{x}$ 2. $\frac{\log 8}{\log x}$ 3. $\frac{8}{logx}$ 4. $\frac{\log x}{\log 8}$