

1. Rewrite in exponential form: $\log_b 3 = z$

2. \$621.32 is deposited into an account that will earn a rate of 4.5% over 14 years compounded 27 times per year. What will be the final amount to the nearest cent?

3. \$9,545.22 is deposited into an account that will earn a rate of 5% continuously. How long will it take for the value to be \$22,201.45? Make your result accurate to 3 decimal places.

4. Expand Completely: $\ln\left(\frac{3x^4y^2}{w^3z}\right)$

5. A radio-active substance has a half-life of 17 days. How long will it take for 524 grams of the substance to be reduced to 190 grams? Express your result with 3-decimal accuracy.

6. Use the Logistic Regression for the following data. Find y when $x = 2.1$. Express your result with 3-decimal place accuracy.

x	1	2	4	6	8	10	12
y	0.1	1.4	3.6	6.6	8.6	9.5	9.8

7. Write $y = 4(6)^{5x}$ in the form $y = 4e^{bx}$. Write your result accurate to 3-decimal places.

8. Solve: $e^{2x} - 5e^x + 4 = 0$

9. $5^{3x} = 18$ Solve for x accurate to 3-decimal places.

10. $\log_7 22 =$