

1. Expand Completely: $\log\left(\frac{5x^6y^3}{w^2z}\right)$

2. Use the Logistic Regression for the following data. Find y when $x = 5.3$. Express your result with 3-decimal place accuracy.

x	2	4	6	8	10	12
y	1	2	6	9	13	14

3. $8.3^{5x} = 41.6$ Solve for x accurate to 3-decimal places.

4. Rewrite in exponential form: $\log_w 32 = y$

5. \$13,612.47 is deposited into an account that will earn a rate of 4.7% continuously. How long will it take for the value to be \$32,317.53? Make your result accurate to 3 decimal places.

6. A radio-active substance has a half-life of 19 days. How long will it take for 615 grams of the substance to be reduced to 170 grams? Express your result with 3-decimal accuracy.

7. $\log_9 37 =$

8. Solve: $e^{2x} - 7e^x + 6 = 0$

9. \$723.46 is deposited into an account that will earn a rate of 4.9% over 16 years compounded 29 times per year. What will be the final amount to the nearest cent?

10. Write $y = 7(4)^{9x}$ in the form $y = 7e^{bx}$. Write your result accurate to 3-decimal places.