

Pre-Cal CW 3.1-3.2 Exponential Functions and Evaluating Logs – Non Calculator

Describe the Transformation for each:

1. $y = 3^{x+4} - 1$

2. $y = 2 \cdot 3^{-x}$

Write the equivalent exponential form for:

3. $\log_6 216 = 3$

Determine the value of x for each:

4. $\log_3 243 = x$

5. $\ln e^{\ln 2} = x$

6. $-2 \ln e^5 = x$

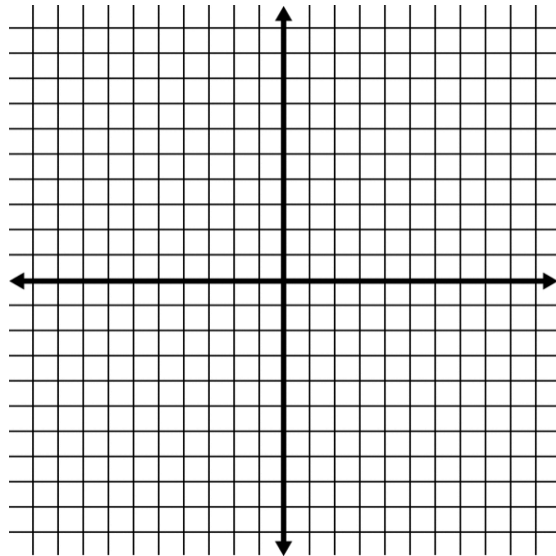
7. $5 \ln e^0 = x$

8. $\log_2 x = 8$

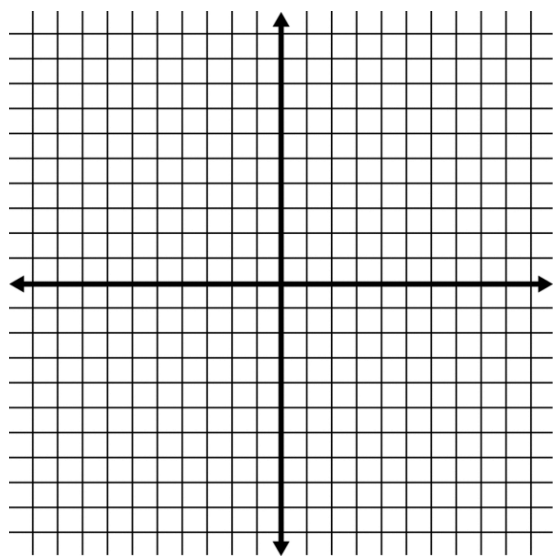
9. $\log_{\frac{1}{9}} 27 = x$

Graph each of the following:

10. $y = 2^{x-3} - 1$



11. $y = -3^{x+1} - 2$



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If you invest \$8000 at a rate of 4.5% for 7 years, what would be your balance if the interest is:

1. Compounded Continuously

2. Compounded Quarterly

3. You have inherited your grandfather's antic stopwatch, which he had purchased for \$90 in 1945. If it has appreciated, on average, at a rate of 3.5% per year what is it worth in 2023?

4. A piece of gum has 140 mg of sugar. Once chewed the half-life of sugar remaining is 6 min. How much sugar is left after 30 minutes of chewing the gum.