



5) Graph $y = 2^{x+1} - 4$

6) Graph $y = \log_2(x + 3)$

Be sure to show all asymptotes with dotted lines on the graphs above

B) State the Domain

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C) State the Range

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7) Suppose that you invest \$50,000 in an account earning 6.5% annual interest. Find the balance in the account at the end of 8 years if your money is compounded: (Round answers to the nearest penny)

Use the Formula: $A = P \left(1 + \frac{r}{n} \right)^{(n \cdot t)}$ (Round answers to the nearest penny)

Compounded	Calculator Entry	Amount
Yearly		\$
Monthly		\$
Daily		\$

8) The formula $D = D_0 e^{-0.2t}$ can be used to find the number of milligrams (mg) D of a certain drug that is in a patient's bloodstream t hours after the drug has been administered where D_0 is the initial amount of the drug administered. Assume that 250 mg of the drug is administered initially.

A) How much of the drug is in the patient's bloodstream 1 hour after it was administered? Round your answer to 1 decimal place.

B) When the amount of the drug in the patient's bloodstream reaches 100 mg, the drug needs to be re-administered. How long until the drug needs to be re-administered? Use your graphing calculator, or solve the equation by hand, whichever you prefer. Round your answer to 1 decimal place.

Solve the Following Equations by Hand. Show your work! Use your calculator to evaluate your final answer - round your answer to 2 decimal places. Remember, you can check your answers using your graphing calculator. However, only partial credit will be earned by only using the CALC/intersect tool on your graphing calculator to find the solutions.

9) $\log_4(3x - 2) = 2$

10) $3^x = 15$

11) $4^{x+5} = 8$

12) $\log(5x - 2) = 3$

13) $\ln(3x) = 2$

14) $8 = 2e^{0.5x}$