

SHOW ALL WORK.

Complete Parts A & B OR Parts B & C

PART A:

Rewrite the equation in exponential form.

1. $\log_6 \frac{1}{36} = -2$

2. $\ln x = 4$

3. $\log a = 3$

Rewrite the equation in logarithmic form.

4. $5^2 = 25$

5. $10^{-2} = \frac{1}{100}$

6. $e^x = 22$

Evaluate the logarithm without using a calculator.

7. $\log_{15} 15$

8. $\log_7 49$

9. $\log_2 32$

10. $\log_9 1$

Use a calculator to evaluate the logarithm.

11. $\log 14$

12. $\ln 6$

13. $\ln 0.43$

14. $\log -2.1$

PART B:

Evaluate the logarithm without using a calculator.

15. $\log_3 \frac{1}{27}$

16. $\log_{64} 8$

17. $\log_{\frac{1}{4}} 16$

18. $\log_{11} 121$

19. $\log_{\frac{1}{2}} 8$

20. $\log_{16} \frac{1}{4}$

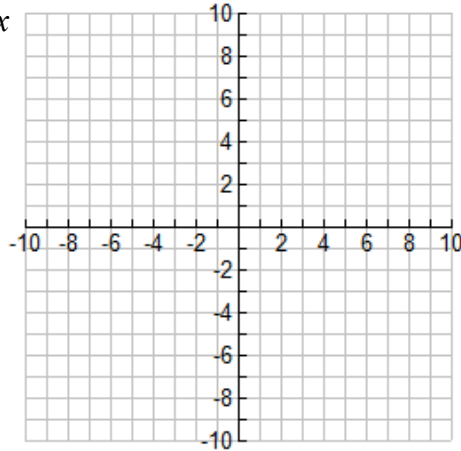
21. $\log_8 512$

22. $\log_5 625$

Graph the function.

23. $y = \log_4 x$

X	Y

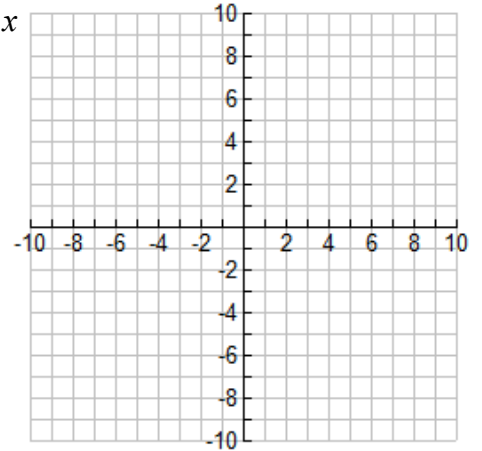


Domain: _____ Asymptote: _____

Range: _____ x-int: _____ y-int: _____

24. $y = \log_6 x$

X	Y



Domain: _____ Asymptote: _____

Range: _____ x-int: _____ y-int: _____

PART C:

Evaluate the logarithm without using a calculator.

25. $\log_{27} 9$

26. $\log_8 32$

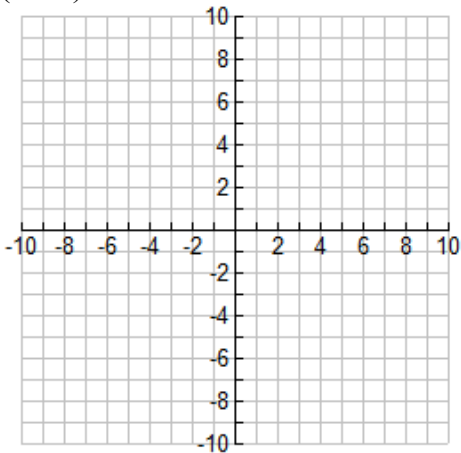
27. $\log_{125} 625$

28. $\log_4 128$

Graph the function. State the domain and range.

29. $y = \log_4(x+2) - 1$

X	Y

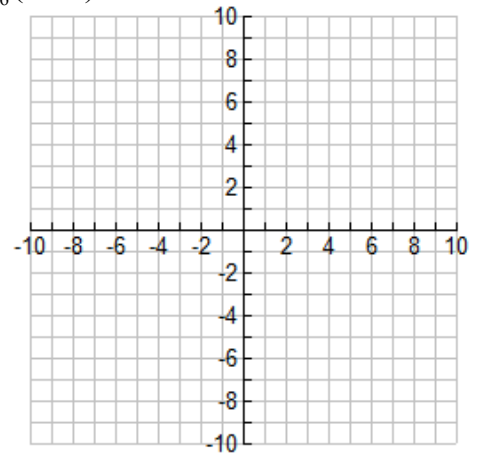


Domain: _____ Asymptote: _____

Range: _____ x-int: _____ y-int: _____

30. $y = \log_6(x-4) + 2$

X	Y



Domain: _____ Asymptote: _____

Range: _____ x-int: _____ y-int: _____