

Rewrite each equation in exponential form.

1) $\log_2 16 = 4$

2) $\log_3 9 = 2$

Evaluate each expression.

3) $\log_4 1$

4) $\log_6 216$

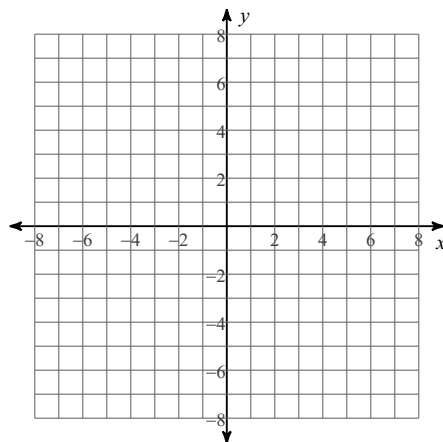
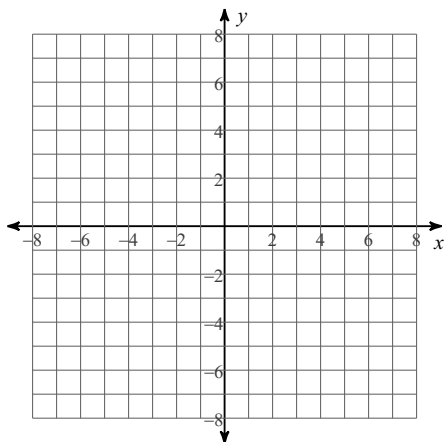
5) $\log_{125} \frac{1}{5}$

6) $\log_{16} 4$

Identify the domain and range of each. Then sketch the graph.

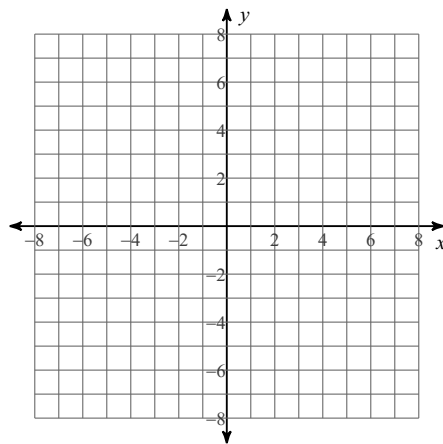
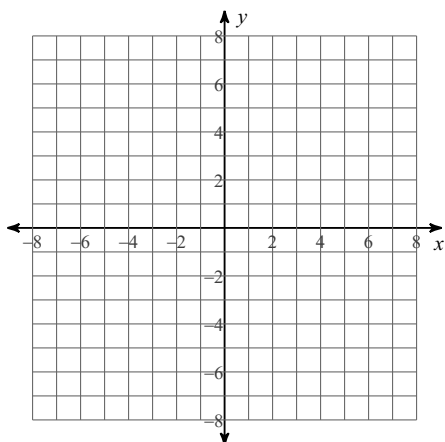
7) $y = \log_2 (x - 1) - 1$

8) $y = \log_3 (x + 5) - 3$



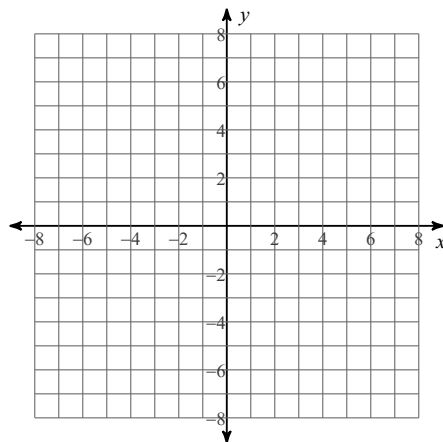
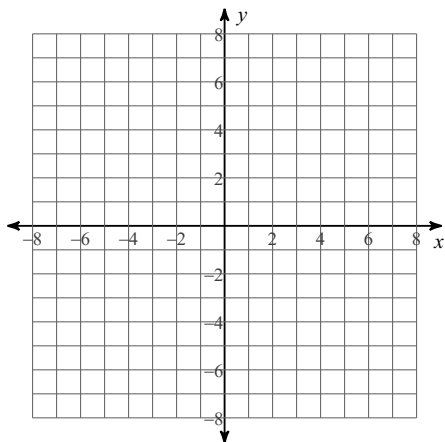
9) $y = \log_{\frac{1}{2}} (x + 2) - 1$

10) $y = \log_5 (x + 6) + 3$



11) $y = \log_6 (x - 3) + 2$

12) $y = \log_5 (x + 2) + 2$



Answers to

1) $2^4 = 16$

2) $3^2 = 9$

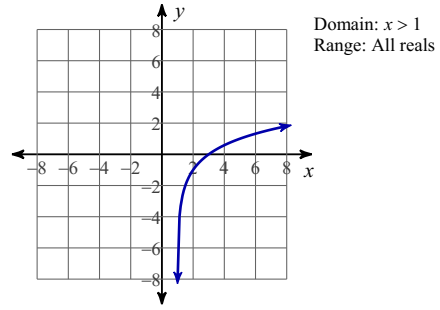
3) 0

4) 3

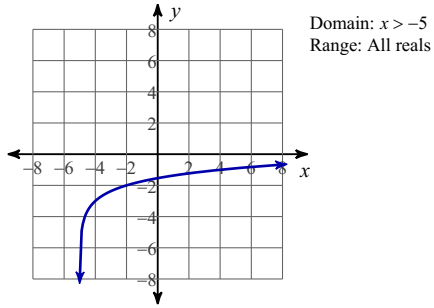
5) $-\frac{1}{3}$

6) $\frac{1}{2}$

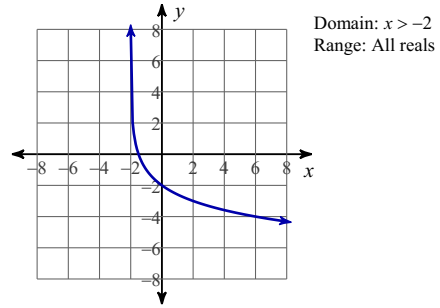
7)



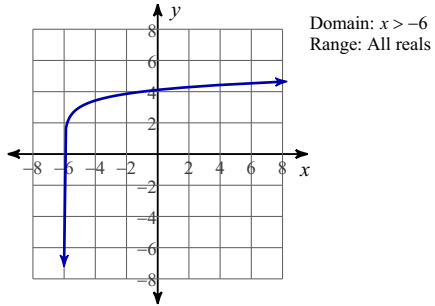
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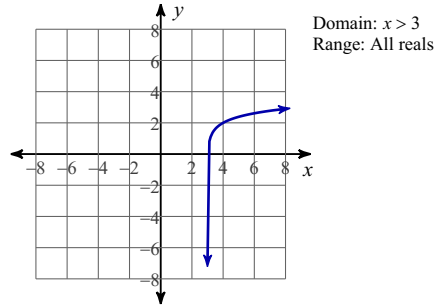
9)



10)



11)



12)

