

Math-1010 HW #3-5 (Logarithms)

Date _____ Period _____

Identify the domain and range of each.

1) $y = \log_4 (4x + 12)$

2) $y = \log_5 (4x - 3)$

3) $y = \log_5 (2x + 5)$

4) $y = \log_4 (3x + 8)$

Evaluate each expression.

5) $\log_2 64$

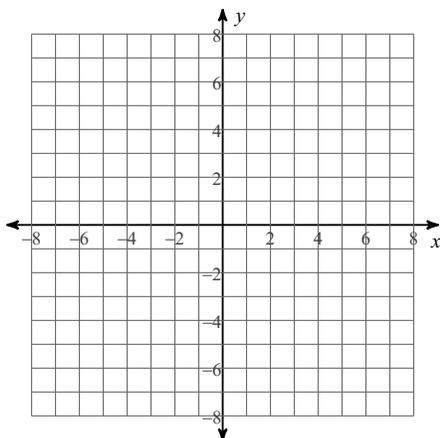
6) $\log_7 \frac{1}{49}$

7) $\log_3 \frac{1}{81}$

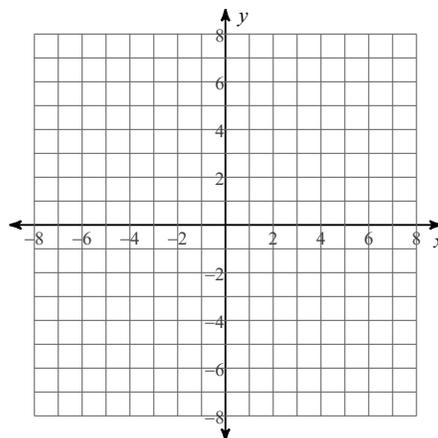
8) $\log_3 81$

Sketch the graph of each function.

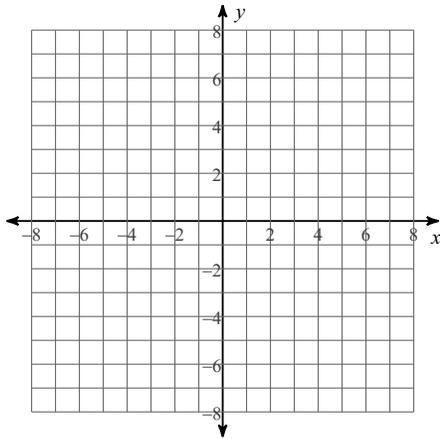
9) $y = \log (x + 4)$



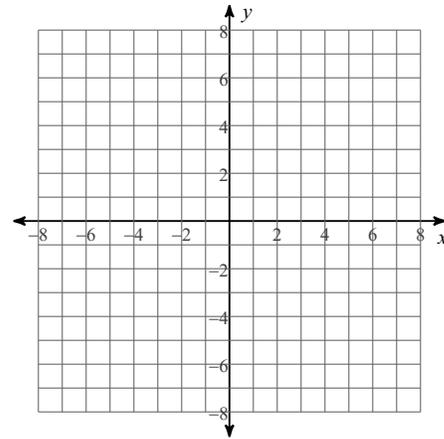
10) $y = \log (x + 1)$



$$11) y = \log(x - 1)$$



$$12) y = \log(x + 6)$$



Rewrite each equation in exponential form.

$$13) \log_{20} 400 = 2$$

$$14) \log_4 16 = 2$$

$$15) \log_{\frac{1}{13}} \frac{1}{169} = 2$$

$$16) \log_{18} 324 = 2$$

Rewrite each equation in logarithmic form.

$$17) 12^{-1} = \frac{1}{12}$$

$$18) \left(\frac{1}{7}\right)^2 = \frac{1}{49}$$

$$19) 19^2 = 361$$

$$20) 12^2 = 144$$