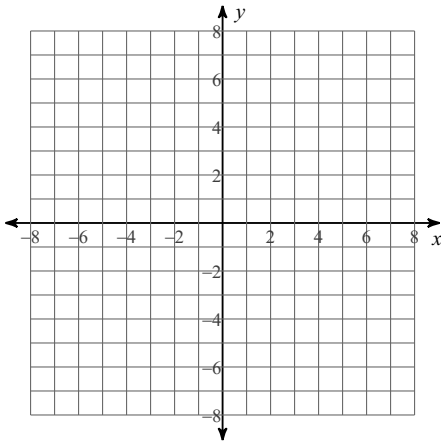


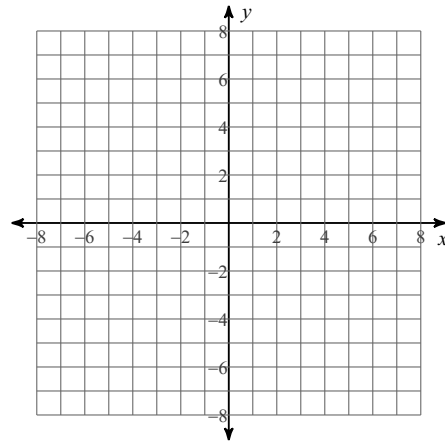
## Graphing Logs

**Sketch the graph of each function.**

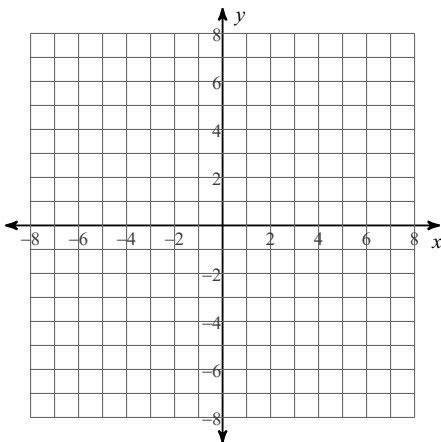
1)  $y = \log(x - 2) - 3$



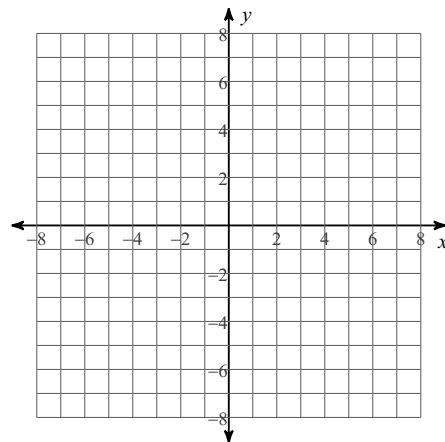
2)  $y = \log(x - 2) - 1$



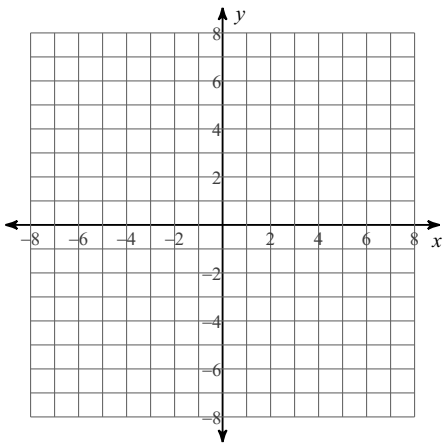
3)  $y = \log(x - 1) - 4$



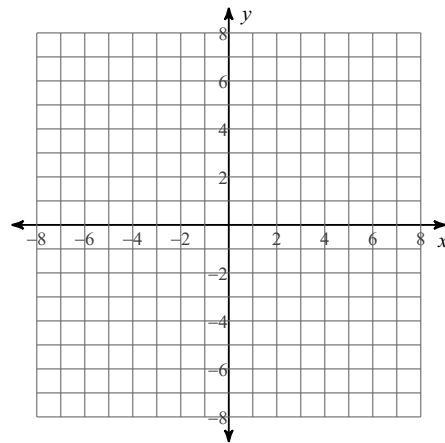
4)  $y = \log(x + 3)$



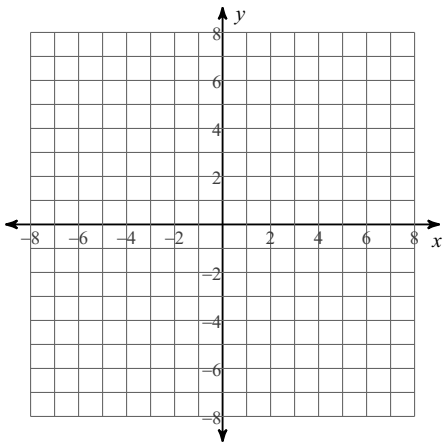
5)  $y = \log_6 (x + 1) + 5$



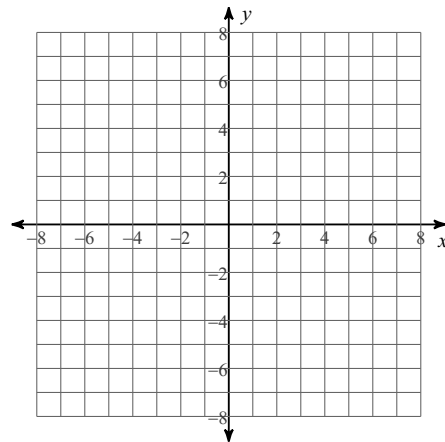
6)  $y = \log_6 (x + 2) + 5$



7)  $y = \log_3 (x - 1) + 5$



8)  $y = \log_2 (x + 1) + 3$



**Rewrite each equation in exponential form.**

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

10)  $\log_8 64 = 2$

11)  $\log_4 16 = 2$

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

**Rewrite each equation in logarithmic form.**

13)  $13^{-1} = \frac{1}{13}$

14)  $12^2 = 144$

15)  $2^3 = 8$

16)  $13^2 = 169$