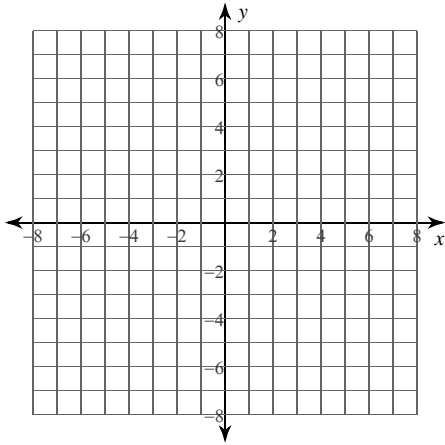


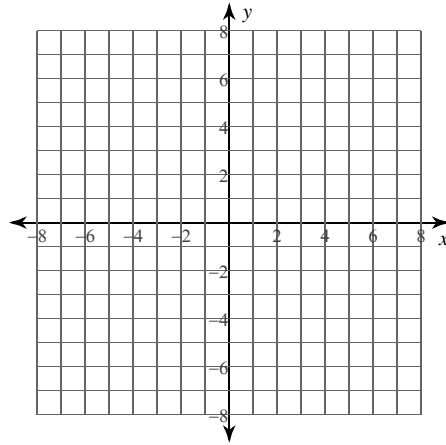
Graphing Logarithms

Sketch the graph of each function.

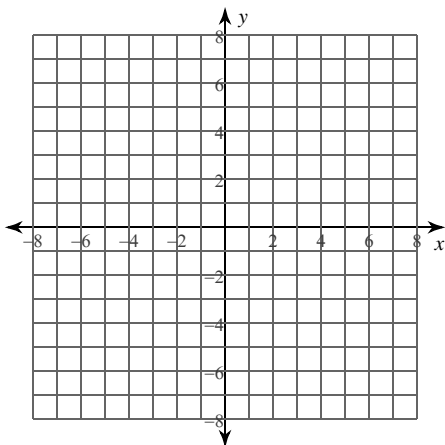
1) $y = \log(x + 5)$



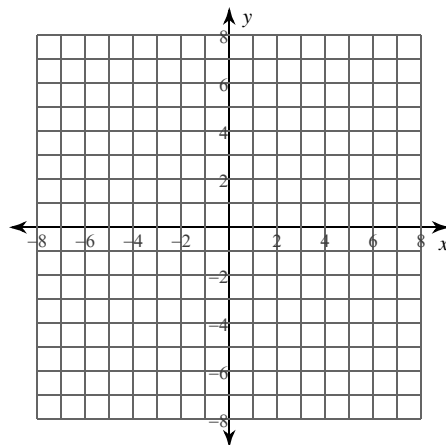
2) $y = \log(x - 2) - 4$



3) $y = \log(x + 4) - 5$

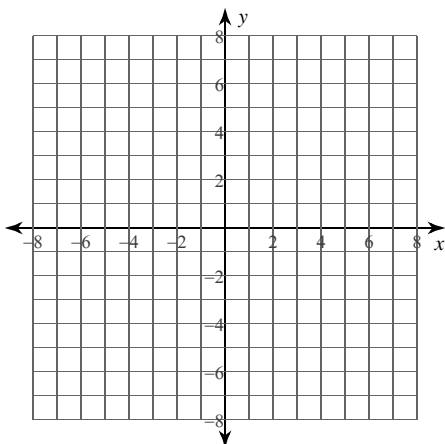


4) $y = \log(x + 1) - 1$

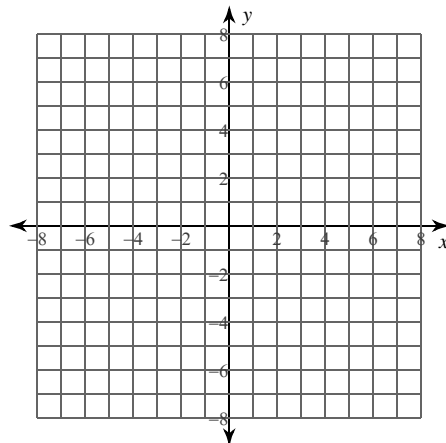


Identify the domain and range of each. Then sketch the graph.

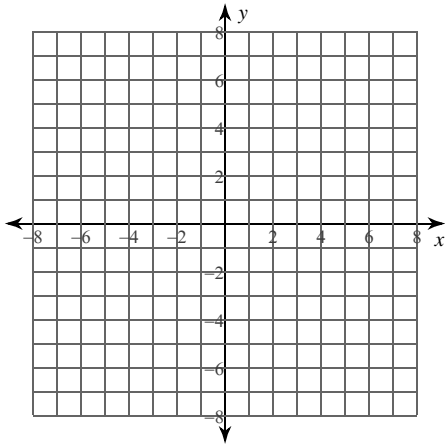
5) $y = \log_3(x - 1) - 3$



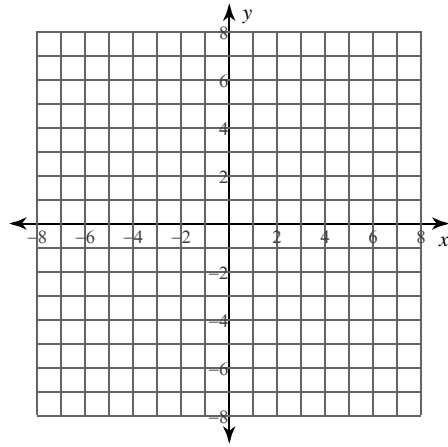
6) $y = \log_{\frac{1}{3}}(x + 4)$



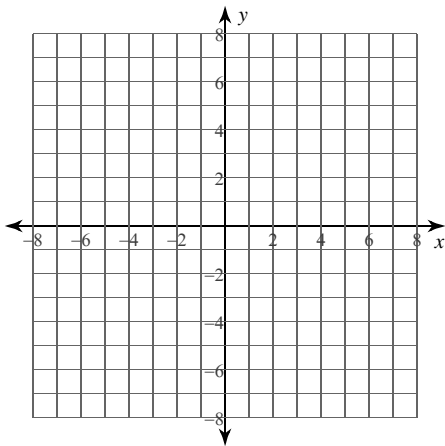
7) $y = \log_4 (x - 1) - 2$



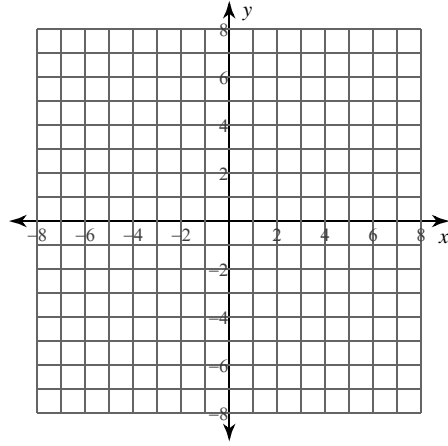
8) $y = \log_3 (x + 6) + 2$



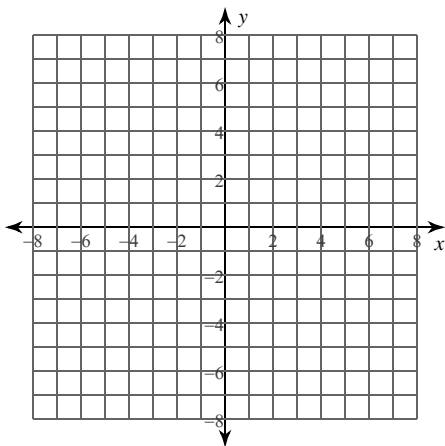
9) $y = \log_2 (4x + 16) - 2$



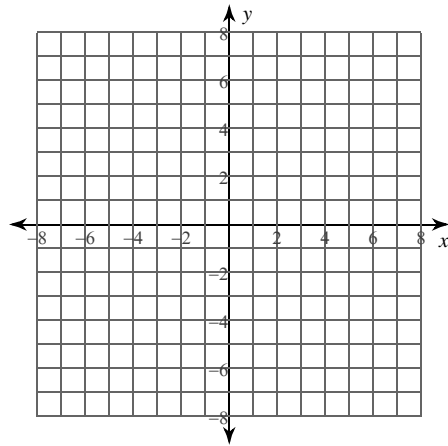
10) $y = \log (3x - 4) - 4$



11) $y = \log_2 (2x - 1) - 4$



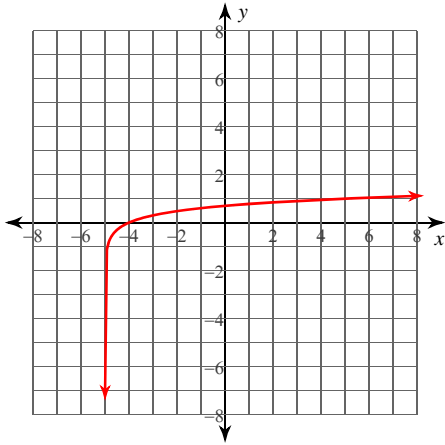
12) $y = \log_2 (4x - 8)$



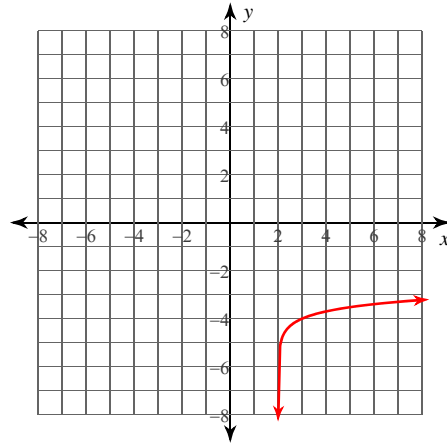
Graphing Logarithms

Sketch the graph of each function.

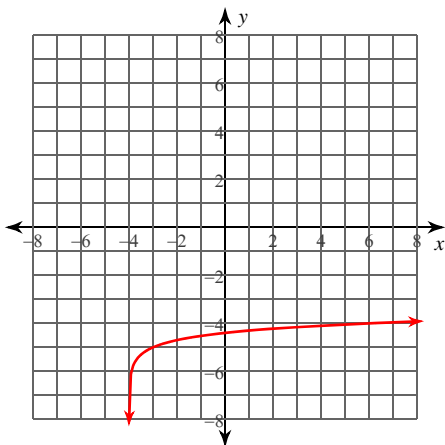
1) $y = \log(x + 5)$



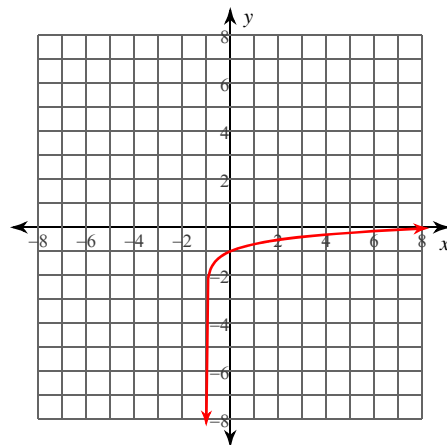
2) $y = \log(x - 2) - 4$



3) $y = \log(x + 4) - 5$

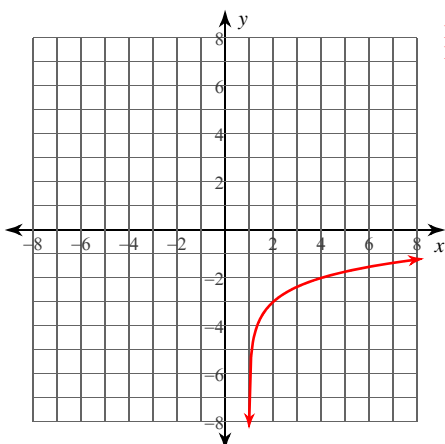


4) $y = \log(x + 1) - 1$



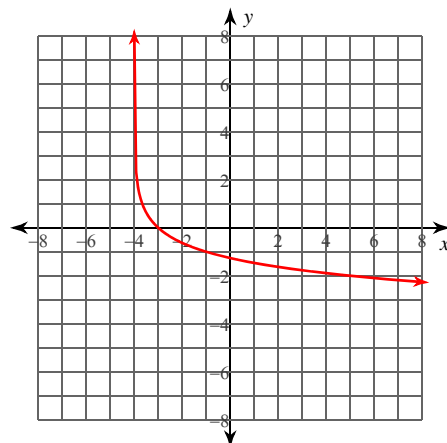
Identify the domain and range of each. Then sketch the graph.

5) $y = \log_3(x - 1) - 3$



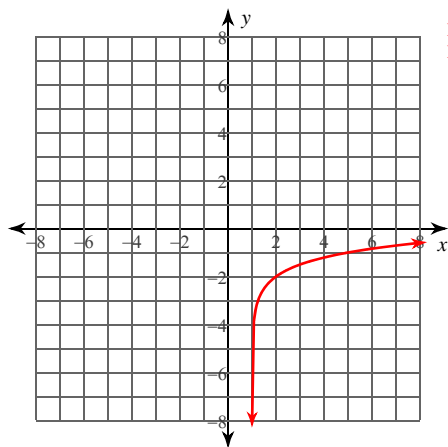
Domain: $x > 1$
Range: All reals

6) $y = \log_{\frac{1}{3}}(x + 4)$



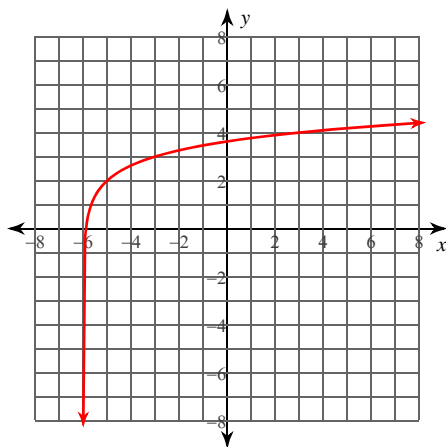
Domain: $x > -4$
Range: All reals

7) $y = \log_4 (x - 1) - 2$



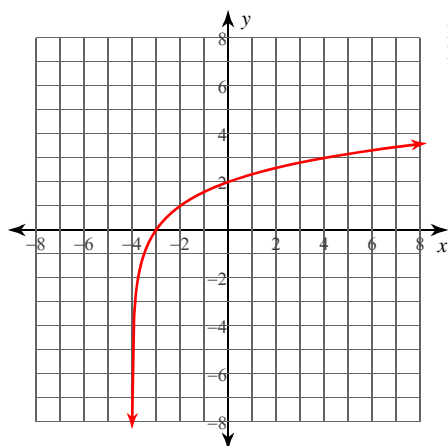
Domain: $x > 1$
Range: All reals

8) $y = \log_3 (x + 6) + 2$



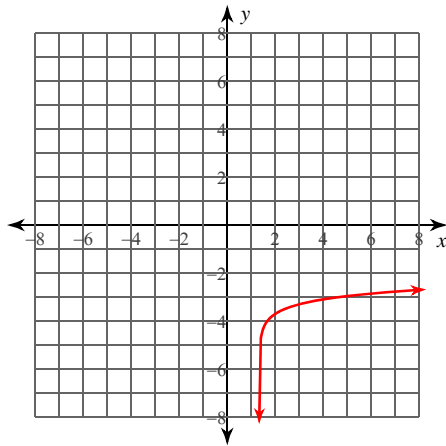
Domain: $x > -6$
Range: All reals

9) $y = \log_2 (4x + 16) - 2$



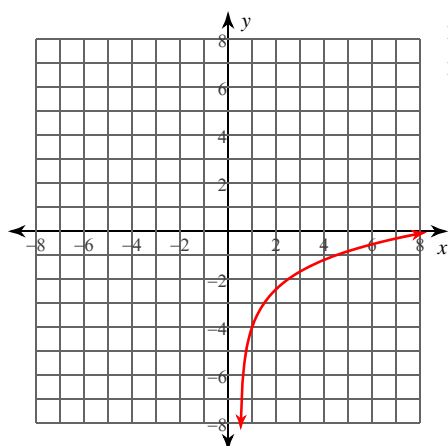
Domain: $x > -4$
Range: All reals

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



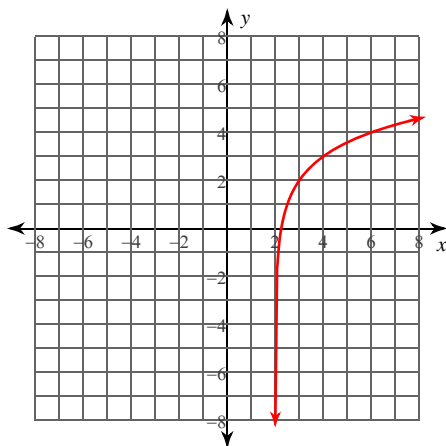
Domain: $x > \frac{4}{3}$
Range: All reals

11) $y = \log_2 (2x - 1) - 4$



Domain: $x > \frac{1}{2}$
Range: All reals

12) $y = \log_2 (4x - 8)$



Domain: $x > 2$
Range: All reals