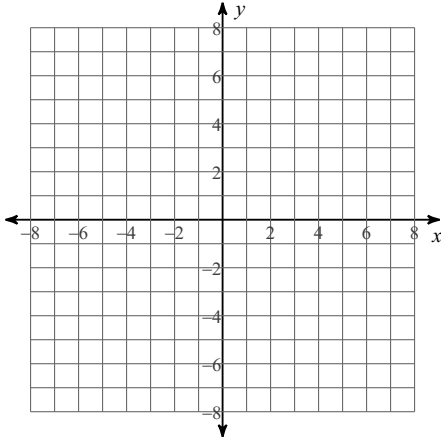


Review

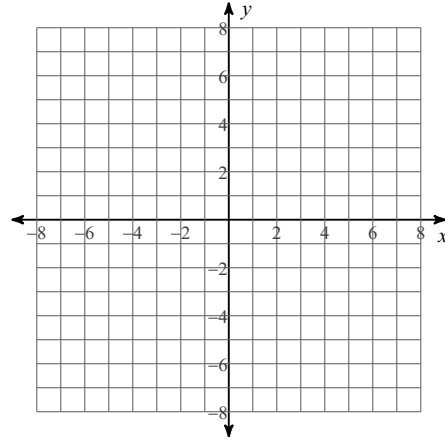
Date _____ Period _____

Sketch the graph of each function.

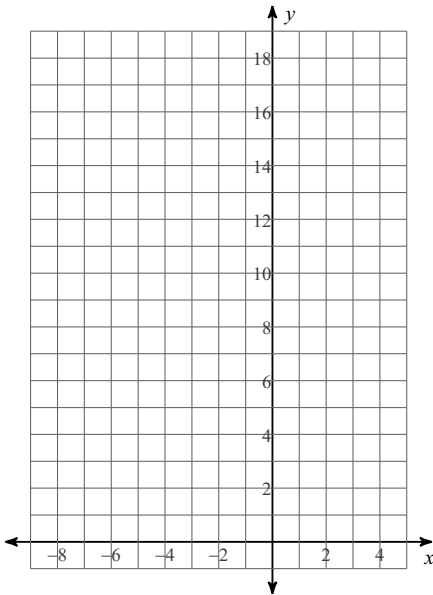
1) $y = \log_3(x + 5) - 5$



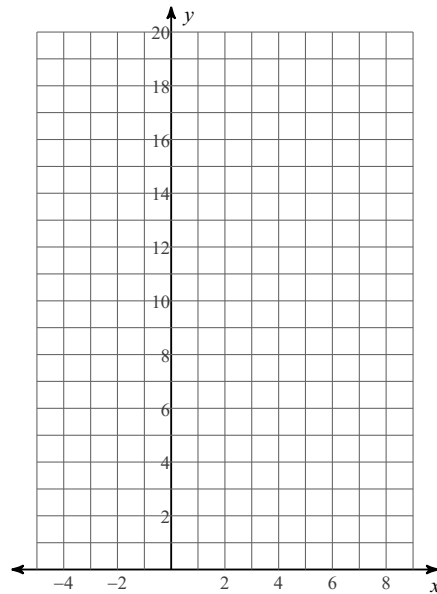
2) $y = \log_6(x - 1) - 2$



3) $y = 2^{x+2} - 1$



4) $y = \left(\frac{1}{2}\right)^{x-2} + 2$

**Solve each equation.**

5) $4^{-m} = 1$

6) $216^{-2p} = 36^{-2p}$

7) $\left(\frac{1}{216}\right)^{-x-3} \cdot 216^x = 36$

8) $\frac{6^p}{36} = 6^{3p-3}$

Rewrite each equation in exponential form.

9) $\log_5 125 = 3$

10) $\log_7 49 = 2$

11) $\log_2 64 = 6$

Rewrite each equation in logarithmic form.

12) $125^{\frac{1}{3}} = 5$

13) $18^{-2} = \frac{1}{324}$

14) $9^2 = 81$

Use a calculator to approximate each to the nearest thousandth.

15) $\log_5 40$

16) $\log_2 57$

17) $\log_7 18$

18) $\log_2 6.7$

19) The population of West Monroe is growing at the rate of 1.25% per year. The population in 2010 was 50,000. What will the population be in 2020?

20) Suppose Si invests \$500 at 9% annual interest compounded monthly. Find the value of his investment after 5 years.

21) Jase invests \$1000 at 8% annual interest compounded continuously. Find the value of his investment after 8 years.

22) The population of Natchitoches was 8000 in the year 1890. Assume the population decreased at a rate of 2.75% per year. What was the population in 1920?