

6.1 EXERCISES

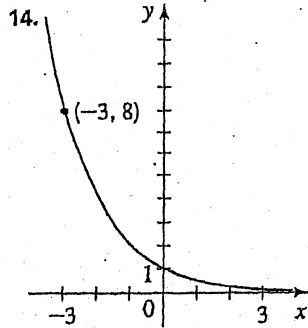
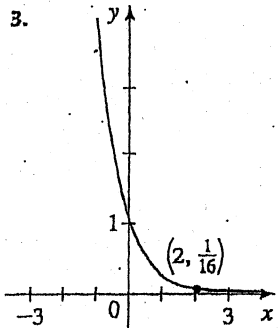
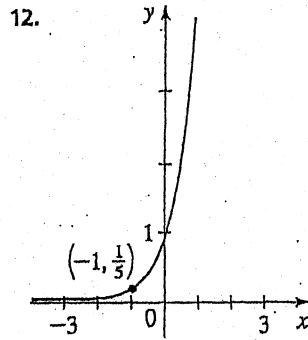
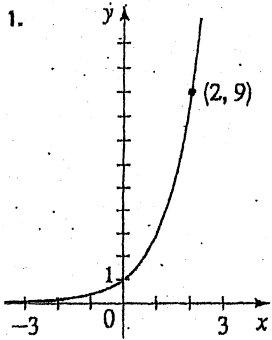
8 ■ Sketch the graph of the function by making a table of values. Use a calculator if necessary.

- 1.  $f(x) = 2^x$
- 2.  $g(x) = 8^x$
- 3.  $h(x) = 6^x$
- 4.  $h(x) = (0.8)^x$
- 5.  $f(x) = (\frac{1}{3})^x$
- 6.  $h(x) = (1.1)^x$
- 7.  $g(x) = (\frac{1}{4})^x$
- 8.  $f(x) = (\frac{3}{2})^x$

-10 ■ Graph both functions on one set of axes.

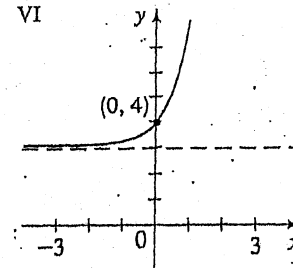
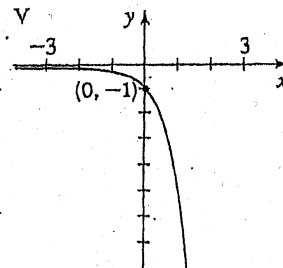
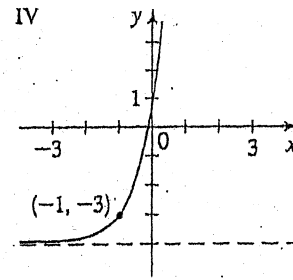
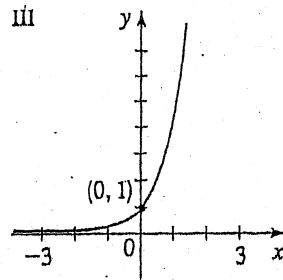
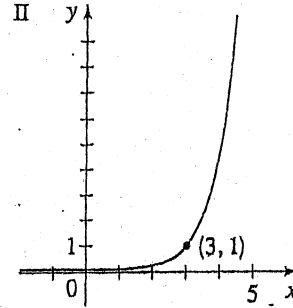
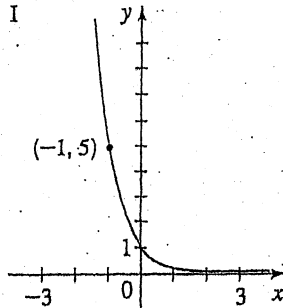
- 1.  $y = 4^x$  and  $y = 7^x$
- 2.  $y = (\frac{2}{3})^x$  and  $y = (\frac{4}{3})^x$

1-14 ■ Find the exponential function  $f(x) = a^x$  whose graph is given.



15-20 ■ Match the exponential function with one of the graphs labeled I-VI.

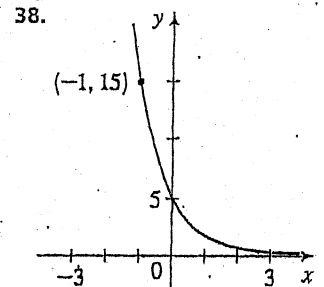
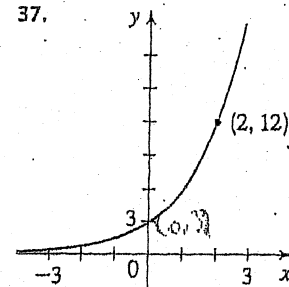
- 15.  $f(x) = 5^x$
- 16.  $f(x) = -5^x$
- 17.  $f(x) = 5^{-x}$
- 18.  $f(x) = 5^x + 3$
- 19.  $f(x) = 5^{x-3}$
- 20.  $f(x) = 5^{x+1} - 4$



21-36 ■ Graph the function, not by plotting points, but by starting from the graphs in Figure 4. State the domain, range, and asymptote.

- 21.  $f(x) = -3^x$
- 22.  $f(x) = 10^{-x}$
- 23.  $g(x) = 2^x - 3$
- 24.  $g(x) = 2^{x-3}$
- 25.  $h(x) = 4 + (\frac{1}{3})^x$
- 26.  $h(x) = 6 - 3^x$
- 27.  $f(x) = 10^{x+3}$
- 28.  $f(x) = -(\frac{1}{3})^x$
- 29.  $f(x) = -3^{-x}$
- 30.  $f(x) = 10^{-x} - 4$
- 31.  $y = 5^{-2x}$
- 32.  $y = 1 + 2^{x+1}$
- 33.  $f(x) = 5 - 2^{x-1}$
- 34.  $f(x) = 1 - 2^{-x}$
- 35.  $y = 2^{|x|}$
- 36.  $y = 2^{-|x|}$

37-38 ■ Find the function of the form  $f(x) = Ca^x$  whose graph is given.



6.2

3-8 ■ Graph the function, not by plotting points; but by starting from the graph of  $y = e^x$  in Figure 1. State the domain, range, and asymptote.

- 3.  $y = -e^x$
- 4.  $y = 1 - e^x$
- 5.  $y = e^{-x} - 1$
- 6.  $y = -e^{-x}$
- 7.  $y = e^{x-2}$
- 8.  $y = e^{x-3} + 4$