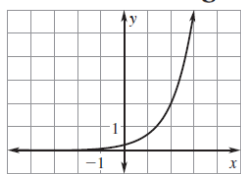


Graph the function. State the domain and range. 1–3. See margin for art.

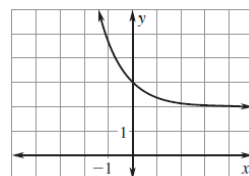
1. $y = 2 \cdot 3^{x-2}$ (p. 478)

domain: all real numbers, range: $y > 0$
Simplify the expression. (p. 492)



3. $f(x) = \left(\frac{3}{8}\right)^x + 2$ (p. 486)

domain: all real numbers, range: $y > 2$



5. $(-5e^{3x})^3 = -125e^{9x}$

7. $\frac{8e^{5x}}{6e^{2x}} = \frac{4}{3}e^{3x}$

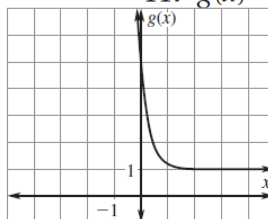
Graph the function. State the domain and range. (p. 492) 8–11. See margin.

9. $y = 3e^{-2x}$



domain: all real numbers, range: $y > 0$

11. $g(x) = 4e^{-3x} + 1$



domain: all real numbers, range: $y > 1$

13. **FINANCE** You deposit \$1200 in an account that pays 4.5% annual interest compounded continuously. What is the balance after 5 years? (p. 492) **\$1502.79**

7.1 Graph the function. State the domain and range. 1–4. See margin for art.

1. $y = \left(\frac{4}{3}\right)^x$ domain: all real numbers, range: $y > 0$ 2. $y = -2 \cdot 2^x$ domain: all real numbers, range: $y < 0$ 3. $y = 3^{x-3} - 2$ domain: all real numbers, range: $y > -2$ 4. $y = \frac{1}{4} \cdot 3^{x+1} + 2$ domain: all real numbers, range: $y > 2$

7.2 Graph the function. State the domain and range. 5–8. See margin for art.

5. $y = \left(\frac{3}{5}\right)^x$ domain: all real numbers, range: $y > 0$ 6. $y = -2\left(\frac{1}{4}\right)^x$ domain: all real numbers, range: $y < 0$ 7. $y = (0.8)^{x-3} - 2$ domain: all real numbers, range: $y > -2$ 8. $y = 2\left(\frac{2}{3}\right)^x + 1$ domain: all real numbers, range: $y > 1$

7.3 Simplify the expression.

9. $e^{-3} \cdot e^{-8} = \frac{1}{e^{11}}$ 10. $(2e^{2x})^{-5} = \frac{1}{32e^{10x}}$ 11. $\sqrt{81e^{8x}} = 9e^{4x}$ 12. $\frac{28e^{3x}}{21e^{-x}} = \frac{4}{3}e^{4x}$

7.3 Graph the function. State the domain and range. 13–16. See margin for art.

13. $y = 0.5e^{3x}$ domain: all real numbers, range: $y > 0$ 14. $y = 2e^{-x} - 2$ See margin. 15. $y = 1.5e^{x+1} + 3$ domain: all real numbers, range: $y > 3$ 16. $y = e^{3(x-2)} + 1$ domain: all real numbers, range: $y > 1$

