

**[2.2]**

■ Write each expression as a single fraction in lowest terms.

11.  $\frac{2a^2}{3b} \cdot \frac{15b^2}{4a}$

13.  $\frac{4x+6}{2x} \cdot \frac{6x^2}{(2x+3)^2}$

15.  $\frac{x^2+x-6}{2x^2-4x+2} \cdot \frac{4x^2-4}{x^2+6x+9}$

17.  $\frac{a^2-a-2}{a^2-4} \div \frac{a^2+2a+1}{a^2-2a}$

19.  $1 \div \frac{4x^2-1}{2x+1}$

12.  $-\frac{1}{3}ab^2 \cdot \frac{3}{4}a^3b$

14.  $\frac{4x^2-9}{3x-3} \cdot \frac{x^2-1}{4x-6}$

16.  $\frac{xy-x+3y-3}{x^4+4x^2+4} \cdot \frac{x^3-x^2+2x-2}{4x^2-36}$

18.  $\frac{a^3-8b^3}{a^2b} \div \frac{a^2-4ab+4b^2}{ab^2}$

20.  $\frac{y^2+2y}{3x} \div 4y$

■ Divide.

21.  $\frac{12y^2z^2+6yz-3}{3yz}$

23.  $\frac{y^3+3y^2-2y-4}{y+1}$

25.  $\frac{x^2+2x^3-1}{2x-1}$

27.  $\frac{2x^3+x-5}{x^2-1}$

22.  $\frac{36x^6-28x^4+16x^2-4}{4x^4}$

24.  $\frac{x^3-4x^2+2x+3}{x-2}$

26.  $\frac{4-y+3y^3}{3y+1}$

28.  $\frac{y^7-1}{y^3-1}$

**[2.3]**

■ Write each expression as a single fraction in lowest terms.

29.  $\frac{x+2}{3x} - \frac{x-4}{3x}$

31.  $\frac{1}{2}a - \frac{2}{3}a$

33.  $\frac{3}{2x-6} - \frac{4}{x^2-9}$

35.  $\frac{2a+1}{a-3} - \frac{a-2}{a^2-4a+3}$

30.  $\frac{y-1}{y+3} - \frac{y+1}{y+3} + \frac{y}{y+3}$

32.  $\frac{5}{6}b - \frac{1}{3}b + \frac{3}{4}b$

34.  $\frac{1}{y^2+4y+4} + \frac{3}{y^2-4}$

36.  $a - \frac{1}{a^2+2a+1} + \frac{3}{a^2-1}$

**[2.4]**

■ Write each complex fraction as a simple fraction in lowest terms.

37.  $\frac{\frac{2}{3}}{3 - \frac{1}{3}}$

38.  $\frac{\frac{3}{4} - \frac{1}{2}}{\frac{3}{4} + \frac{1}{2}}$

39.  $\frac{y - \frac{2y}{x}}{1 + \frac{2}{x}}$