Math 3 Review Sec 6.3 - 6.5

In Exercises 7–12, find the product.

7. $\frac{54x^4y^2}{y^4} \cdot \frac{x^3y^2}{9x^5y^3}$

8. $\frac{x^3(x+2)}{x-1} \cdot \frac{(x-1)(x-3)}{x^4}$

9. $\frac{x^2(x-5)}{x+7} \cdot \frac{(x+7)(x-1)}{4x^2}$

10. $\frac{x^2-5x}{x+3} \cdot \frac{x^2+4x+3}{x}$

In Exercises 14–17, find the quotient.

14. $\frac{28x^4y}{y^7} \div \frac{y^9}{2x^5}$

15. $\frac{x^2-x-6}{3x^4+6x^3} \div \frac{x-3}{6x^3}$

16. $\frac{4x^2+12x}{x^2+2x-3} \div \frac{4x}{5x-5}$

17. $\frac{x^2+5x-14}{x+3} \div (x^2-4x+4)$

Find the sum or difference.

1. $\frac{10}{2x} - \frac{3}{2x}$

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

3. $\frac{x}{2x-4} - \frac{5}{x+1}$

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

5. $\frac{7}{x+8} - \frac{2}{x-1}$

6. $\frac{3x}{x-4} + \frac{8}{x-3}$

7. $\frac{1}{x^2+3x-10} - \frac{4}{x-2}$

Simplify the complex fraction.

8. $\dfrac{\frac{x}{25}}{\frac{4}{x^2}}$

9. $\dfrac{\frac{x^2}{4}}{\frac{x}{x+4}}$

Solve the equation by cross multiplying.

1. $\frac{x-5}{15} = \frac{4}{5}$

3. $\frac{x+3}{x+1} = \frac{15}{x+7}$

Solve the equation by using the LCD. Check your solution(s).

7. $\frac{5}{x} + \frac{1}{3} = 1$

8. $\frac{2}{5x} + \frac{1}{3} = \frac{4}{15x}$

10. $\frac{3}{x-1} + \frac{1}{x+1} = \frac{10}{x^2-1}$