Section 8.3 Algebra 2 Name _____
Period _____

Find the least common multiple for each pair.

1. $15a^2b^4c$ *and* $45ab^3$

2. $24x^4y^5z$ *and* $30x^2y^3z^4$

3. $12x-15y$ *and* $16x^2-25y^2$

4. $6x^2-8x$ *and* $27x^3-48x$

5. x^2-5x+6 *and* $4x-8$

6. $2x^2-32y^2$ *and* $4x-16y$

Add or subtract. Assume all expressions are defined.

7. $\frac{3x+2}{x-2}-\frac{x+6}{x-2}$

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

9. $\frac{x-5}{x^2+8x+15}-\frac{4}{x+3}$

10. $\frac{x-5}{x^2+5x-6}+\frac{x+2}{x+6}$

11. **Rewrite each expression as a single fraction.**

A. $x-\frac{y^2}{x}$ B. $\frac{4x-7}{x-5}-3$ C. $\frac{5}{x-5}+7$

Simplify. Assume that all expressions are defined.

12. $\dfrac{\frac{14x}{x+3}}{x+\frac{x}{6}}$

13. $\dfrac{\frac{x+3}{x-3}}{\frac{4}{x^2-9}}$

14. $\dfrac{\frac{5}{x}+\frac{3}{x}}{\frac{6x}{x+3}}$

15. $\dfrac{\frac{1}{2}-\frac{2}{3x}}{\frac{6x-8}{x-6}}$

16. **Simplify:** $\dfrac{\frac{a-b}{b^2}}{\frac{a^2-b^2}{b}}$ A. $\frac{1}{ab-b^2}$ B. $\frac{1}{ab+b^2}$ C. $\frac{a^2-2ab+b^2}{b^2}$ D. $\frac{a^3-a^2b-ab^2+b^2}{b^3}$

Identify any x-values for which the expression is <u>undefined</u>, then add or subtract the fractions.

17. $\frac{x-5}{x^2-9}+\frac{2x-1}{x-1}$

18. $\frac{x-6}{x^2-3x-18}-\frac{5x}{2(x+3)}$