

Chapter 6 PRACTICE Test

NAME: _____

Perform the indicated operation and simplify the following expressions

1. $\frac{x^2-9}{x^2} \div \frac{x^2+x-12}{x^2-3x}$

2. $\frac{x^2-4x-12}{3x^2-18x} \cdot \frac{3x^2}{x+2}$

1. _____

2. _____

3. $\frac{15}{6x+12} + \frac{3}{6x+12}$

4. $\frac{2x+1}{x^2-9} - \frac{2}{x-3}$

3. _____

4. _____

5. $\frac{7}{x^2+x-2} - \frac{5}{x^2-4x+3}$

6. $\frac{x}{x-5} + \frac{5}{6}$

5. _____

6. _____

Simplify the complex fractions

7. $\frac{\frac{4}{x-2} + \frac{2}{3}}{\frac{6}{x-2}}$

8. $\frac{\frac{4}{7x^4}}{\frac{1}{21x^2}}$

7. _____

8. _____

Solve for x and check for extraneous solutions

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

10. $\frac{4}{x-3} + \frac{2x}{x^2-9} = \frac{1}{x+3}$

9. _____

10. _____

11. $(-4x^3y - 12x^2y^4 + 20x + 48x^2y^5) \div (4xy)$

Divide

11. _____

12. _____

12. $(x^4 - 2x^3 - x - 10) \div (x - 3)$

Bonus

13. simplify $\frac{\frac{x^2-x-20}{x^2+7x+12}}{\frac{x^2-10x+25}{x^2+6x+9}}$

*13. _____

*14. _____

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