Name _____ Date _____
Mr. Schlansky Algebra II

Fractional Equations

Solve the following fractional equations and list the solutions as well as the extraneous solutions

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

2. $\frac{1}{7}+\frac{2x}{3}=\frac{15x-3}{21}$

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

4. $\frac{4x}{x-3}=2+\frac{12}{x-3}$

5. $\frac{5}{x}=\frac{x+13}{6}$

6. $\frac{1}{m+10}+\frac{1}{5}=\frac{3}{m+10}$

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

8. $\frac{2}{x} - \frac{3x}{x+3} = \frac{x}{x+3}$

9. $\frac{-3}{x+3} + \frac{1}{2} = \frac{x}{6} - \frac{1}{2}$

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

11. $\frac{3x+25}{x+7} - 5 = \frac{3}{x}$

12. $\frac{3p}{p-5} - \frac{2}{p+3} = \frac{p}{p+3}$

13. $\frac{1}{x-2}+\frac{4}{x+5}=\frac{7}{x^2+3x-10}$

14. $\frac{x}{x+2}+\frac{1}{x^2-4}=\frac{4}{x-2}$

15. $\frac{1}{b-3}-\frac{3}{2b+6}=\frac{b}{b^2-9}$

16. $\frac{a}{a-2}-\frac{8}{a+3}=\frac{10}{a^2+a-6}$

17. $\frac{1}{y}+\frac{6}{y^2+2y}=\frac{5}{y+2}$

18. $\frac{8}{x^2-121}=\frac{x}{x+11}-\frac{2}{x-11}$

19. Which of the following is true based on the equation $\frac{x}{x+3}+\frac{2}{x+1}=\frac{6}{x^2+4x+3}$?

1) -3 is an extraneous solution
2) -1 is an extraneous solution
3) -3 and -1 are extraneous solutions
4) -3 and 0 are extraneous solutions

20. To solve $\frac{2x}{x-2}-\frac{11}{x}=\frac{8}{x^2-2x}$, Ren multiplied both sides by the least common denominator. Which statement is true?

1) 2 is an extraneous solution.
2) $\frac{7}{2}$ is an extraneous solution.
3) 0 and 2 are extraneous solutions.
4) This equation does not contain any extraneous solutions.