

Name \_\_\_\_\_  
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Date \_\_\_\_\_  
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.  $\frac{1}{m+10} + \frac{1}{5} = \frac{3}{m+10}$

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

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

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

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

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

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