

# Math 1513 - College Algebra

## Discussion Board Week 5 - Due 2016.02.14

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Solve each equation and identify any extraneous solutions.

1.  $\frac{1}{x} + \frac{1}{x+1} = \frac{5}{x^2+x}$

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

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

4.  $\frac{6}{x+3} + \frac{20}{x^2+x-6} = \frac{5}{x-2}$

5.  $x + \frac{14}{x-7} = 1 + \frac{2x}{x-7}$

6.  $\frac{21}{x+2} + \frac{3}{x-1} = \frac{5}{3}$

7.  $\frac{10}{x-5} + x = 1 + \frac{2x}{x-5}$

8.  $\frac{7}{x+2} - \frac{1}{x^2+5x+6} = -\frac{2}{x+3}$

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

10.  $-\frac{5}{2x-3} = \frac{7}{3x-5} + \frac{2}{3}$

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

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

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

14.  $\frac{2}{x-3} - \frac{3}{x^2-9} = -\frac{2}{x+3}$

15.  $\frac{5}{x+2} + \frac{1}{x^2-4} = \frac{12}{x-2}$

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

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

18.  $2x - \frac{14}{2x-1} = 3 + \frac{2x}{2x-1}$

19.  $\frac{1}{3x} + \frac{1}{4x} = \frac{3}{4x^2} + 1$

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

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

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

23.  $\frac{2}{x+3} - \frac{1}{x^2+x-6} = -\frac{5}{x-2}$

24.  $\frac{17}{x+5} + \frac{2}{x-3} = -\frac{1}{x^2+2x-15}$

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