PreCalculus Name_____ ID: 1

© 2017 Kuta Software LLC. All rights reserved.

0.2 Part 3: Solving Rational Equations

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $\frac{1}{n^2} = \frac{1}{n} + \frac{6}{n^2}$

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

3) $\frac{1}{6r} + \frac{5}{6} = \frac{r-1}{6r}$

4) $\frac{b+3}{6b} + 1 = \frac{5b+20}{6b}$

5) $\frac{3}{k^2} - \frac{6}{k} = \frac{1}{k^2}$

6) $\frac{3n-6}{2n^2} = \frac{1}{n} + \frac{2}{n^2}$

7) $\frac{m-2}{5m^2} = \frac{1}{5m} + \frac{1}{m}$

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

9) $\frac{1}{x^2-4x} + \frac{x+4}{x^2-4x} = \frac{2}{x-4}$

10) $\frac{1}{k+1} - 1 = \frac{6}{k+1}$

© 2017 Kuta Software LLC. All rights reserved. Made with Infinite Algebra 2.

11) $\frac{5}{2b} - \frac{4}{b^2 - 4b} = \frac{1}{2b^2 - 8b}$

12) $\frac{5}{2} - \frac{1}{2r + 4} = \frac{1}{r + 2}$

13) $\frac{2}{m^2 - 6m} = \frac{1}{m} + \frac{1}{m^2 - 6m}$

14) $\frac{1}{6m} - 1 = \frac{5m - 10}{6m}$

Solve each by factoring. (Factor by grouping)

15) $x^6 + 2x^4 - 16x^2 - 32 = 0$

16) $x^6 + 4x^4 - x^2 - 4 = 0$

17) $x^6 - x^4 - x^2 + 1 = 0$

18) $x^6 - 3x^4 - x^2 + 3 = 0$

19) $x^6 + 3x^4 - 25x^2 - 75 = 0$

20) $x^6 - 3x^4 - 4x^2 + 12 = 0$

© 2017 Kuta Software LLC. All rights reserved.

Made with Infinite Algebra 2.