Algebra 2 Name_____

Solving Rationals 1

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $\frac{n-3}{n} + \frac{1}{3} = \frac{n-4}{n}$

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

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

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

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

6) $\frac{1}{2b} + \frac{5}{4} = \frac{1}{2}$

7) $\frac{3}{a} - \frac{a+1}{2a^2} = \frac{a+2}{a^2}$

8) $\frac{2}{v} = \frac{1}{5v^2} + \frac{v-6}{v^2}$

9) $2 - \frac{6}{p} = \frac{p+1}{p}$

10) $\frac{6k+36}{k^2} = \frac{1}{k} - \frac{1}{k^2}$

11) $\frac{x-8}{x^2} = \frac{8}{3x} + \frac{x-6}{x^2}$

12) $\frac{1}{n^2} = \frac{1}{n} - \frac{5}{7n^2}$

13) $\frac{1}{r^2 - 8r} + \frac{4}{r} = \frac{7}{r - 8}$

14) $1 - \frac{1}{6n - 5} = \frac{2}{6n - 5}$

15) $\frac{1}{m^2 + 4m} = \frac{8m - 8}{3m^2 + 12m} - \frac{1}{3m^2 + 12m}$

16) $\frac{x + 2}{x^2 - 7x} = \frac{x - 4}{x^2 - 7x} - \frac{6}{x}$

Answers to Solving Rationals 1 (ID: 1)

1) $\{-3\}$

2) $\left\{-\frac{5}{4}\right\}$

3) $\{3\}$

4) $\{3\}$

5) $\left\{\frac{1}{3}\right\}$

6) $\left\{-\frac{2}{3}\right\}$

7) $\left\{\frac{5}{3}\right\}$

8) $\left\{-\frac{29}{5}\right\}$

9) $\{7\}$

10) $\left\{-\frac{37}{5}\right\}$

11) $\left\{-\frac{3}{4}\right\}$

12) $\left\{\frac{12}{7}\right\}$

13) $\left\{-\frac{31}{3}\right\}$

14) $\left\{\frac{4}{3}\right\}$

15) $\left\{\frac{3}{2}\right\}$

16) $\{6\}$