Rational equations

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $\frac{3}{v} = \frac{v+2}{2v} + \frac{1}{v}$

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

3) $\frac{3m-4}{5m^2} + \frac{1}{m^2} = \frac{1}{5m}$

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

5) $\frac{4}{n^2 - n} = \frac{1}{n^2 - n} + \frac{6}{n}$

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

7) $\frac{n - 6}{n} = \frac{n^2 + 5n + 4}{n^2 - 4n} + \frac{1}{n}$

8) $\frac{x + 6}{15x + 6} = \frac{x^2 - 4x - 12}{15x^2 + 51x + 18} + \frac{4}{15x^2 + 51x + 18}$

Algebra 2 Name_____ ID: 1

Rational equations

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $\frac{3}{v} = \frac{v+2}{2v} + \frac{1}{v}$

$\{2\}$

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

$\left\{-\frac{1}{2}\right\}$

3) $\frac{3m-4}{5m^2} + \frac{1}{m^2} = \frac{1}{5m}$

$\left\{-\frac{1}{2}\right\}$

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

$\left\{\frac{8}{3}\right\}$

5) $\frac{4}{n^2 - n} = \frac{1}{n^2 - n} + \frac{6}{n}$

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

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

$\left\{-\frac{5}{3}\right\}$

7) $\frac{n - 6}{n} = \frac{n^2 + 5n + 4}{n^2 - 4n} + \frac{1}{n}$

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

8) $\frac{x + 6}{15x + 6} = \frac{x^2 - 4x - 12}{15x^2 + 51x + 18} + \frac{4}{15x^2 + 51x + 18}$

$\{-2\}$