 Name_____

Rational Equations

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

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

2) $\frac{5v - 5}{v} - \frac{5v + 15}{v} = 1$

3) $\frac{5a + 20}{6a} + \frac{1}{a} = \frac{3}{2a}$

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

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

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

7) $\frac{5}{k} = \frac{1}{k} - 1$

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

9) $\frac{4}{n+1} - \frac{1}{n^2+7n+6} = \frac{3}{n^2+7n+6}$

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

11) $\frac{3v^2+21v+18}{v^2+2v} = \frac{1}{v} - \frac{1}{v^2+2v}$

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

13) $\frac{b+1}{b^2-2b} + \frac{6b^2-24b+18}{b^2-2b} = \frac{2b-4}{b}$

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

15) $\frac{1}{n^2+11n+30} = \frac{1}{n+5} - 4$

16) $\frac{n}{n+5} = \frac{n+4}{2n+10} + \frac{n^2+6n+8}{2n^2+10n}$

 Name_____

Rational Equations

Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

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

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

2) $\frac{5v - 5}{v} - \frac{5v + 15}{v} = 1$

$\{-20\}$

3) $\frac{5a + 20}{6a} + \frac{1}{a} = \frac{3}{2a}$

$\left\{-\frac{17}{5}\right\}$

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

$\{1\}$

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

$\{3\}$

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

$\{-2\}$

7) $\frac{5}{k} = \frac{1}{k} - 1$

$\{-4\}$

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

$\{1\}$

9) $\frac{4}{n+1} - \frac{1}{n^2+7n+6} = \frac{3}{n^2+7n+6}$

$\{-5\}$

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

$\left\{\frac{5}{4}\right\}$

11) $\frac{3v^2+21v+18}{v^2+2v} = \frac{1}{v} - \frac{1}{v^2+2v}$

$\left\{-1, -\frac{17}{3}\right\}$

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

$\{3\}$

13) $\frac{b+1}{b^2-2b} + \frac{6b^2-24b+18}{b^2-2b} = \frac{2b-4}{b}$

$\left\{1, \frac{11}{4}\right\}$

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

$\{-5\}$

15) $\frac{1}{n^2+11n+30} = \frac{1}{n+5} - 4$

$\left\{-\frac{23}{4}\right\}$

16) $\frac{n}{n+5} = \frac{n+4}{2n+10} + \frac{n^2+6n+8}{2n^2+10n}$

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