Name_____

Solving Rational Equations

Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{2}{k} + \dfrac{k+2}{k^2} = \dfrac{k+5}{2k^2}$

2) $\dfrac{1}{2n} = \dfrac{5n+5}{2n^2} - \dfrac{1}{n^2}$

3) $\dfrac{5}{2p^2} = \dfrac{1}{p^2} + \dfrac{5}{2p}$

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

5) $1 - \dfrac{2}{5x-2} = \dfrac{6}{5x-2}$

6) $\dfrac{v^2-16}{v^2+16v+64} = \dfrac{v^2-3v-10}{v^2+16v+64} + \dfrac{2}{v+8}$

7) $\dfrac{1}{x^2+x} = \dfrac{x^2+9x+18}{x^3+9x^2+8x} - \dfrac{x-3}{x^2+x}$

8) $\dfrac{b^2+7b+10}{b^3+6b^2} = \dfrac{1}{b+6} + \dfrac{5b-20}{b^3+6b^2}$

9) $\dfrac{r+1}{r} - \dfrac{r^2-36}{r^2+5r} = \dfrac{5}{r^2+5r}$

10) $\dfrac{4n+20}{n^2-4n} = \dfrac{n-3}{3n-12} + \dfrac{2}{n^2-4n}$

11) $\dfrac{3}{x^2-6x} - \dfrac{6}{x} = \dfrac{1}{x^2-6x}$

12) $\dfrac{5}{a^2+3a} = \dfrac{4}{a} - \dfrac{1}{a^2+3a}$