

## 13.5 Solving Rational Equations

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**Solve each equation. Remember to check for extraneous solutions.**

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

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

3) 
$$\frac{1}{k} + \frac{1}{4k^2} = \frac{1}{2k^2}$$

4) 
$$\frac{1}{2} = \frac{x+3}{2x} - \frac{5x-30}{2x^2}$$

5) 
$$\frac{m+4}{3m} = \frac{4}{m} - \frac{m^2+8m+16}{3m}$$

6) 
$$\frac{5}{6n^2} - \frac{n^2-7n+10}{3n^2} = \frac{1}{6n}$$

$$7) \frac{b-3}{2b^2-8b} = \frac{1}{2} + \frac{1}{2b-8}$$

$$8) 2v-4 = \frac{1}{6} + \frac{v-4}{6v}$$

$$9) \frac{3}{x-3} - \frac{x+4}{x} = 1$$

$$10) \frac{1}{n-6} + \frac{n^2-6n+9}{n^2-6n} = 1$$

$$11) \frac{r-4}{2r} - \frac{r^2+4r-12}{2r^2+6r} = \frac{1}{2r}$$

$$12) 1 - \frac{1}{x+7} = \frac{4}{x+7}$$

$$13) \frac{n+5}{5n+4} = \frac{1}{5n+4} - 1$$

$$14) \frac{1}{4a^2-4a-8} - \frac{1}{4a+4} = \frac{1}{4a-8}$$