

More Rationals Practice

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Simplify each expression.

1) $\frac{5a}{4a} + \frac{a+6}{a-1}$

2) $\frac{5r}{2} - \frac{r-2}{2(2r-5)}$

3) $\frac{2b-3}{12b^2-9b} + \frac{b+2}{2}$

4) $\frac{4}{x-4} - \frac{4}{3x}$

5) $\frac{3a}{3a(3a+8)} \cdot \frac{10(3a+8)}{a-4}$

6) $\frac{3n-5}{5} \div \frac{(3n-5)(3n+5)}{(n+8)(3n+5)}$

7) $\frac{18k^2-36k}{3k-6} \cdot \frac{8k^2}{6k}$

8) $\frac{7k+8}{7k^2-13k-24} \div \frac{1}{k^2+7k+6}$

Solve each equation. Remember to check for extraneous solutions.

9) $\frac{1}{n-5} = \frac{1}{n^2-10n+25} + \frac{2n+4}{n^2-10n+25}$

10) $\frac{3}{x+1} + 4 = \frac{2}{x+1}$

11) $\frac{6}{x^2-12x+36} = \frac{1}{x^2-12x+36} - \frac{1}{x-6}$

12) $\frac{a-3}{a+2} - \frac{2}{a^2+8a+12} = \frac{a-5}{a^2+8a+12}$

13) $\frac{3v^2+14v+15}{v^2+2v} = \frac{1}{v^2+2v} + \frac{1}{v}$

14) $\frac{6x+36}{x} + \frac{x-3}{x^2+3x} = \frac{1}{x^2+3x}$

Answers to More Rationals Practice

$$1) \frac{9a + 19}{4(a - 1)}$$

$$4) \frac{8x + 16}{3x(x - 4)}$$

$$8) \frac{(k + 6)(k + 1)}{k - 3}$$

$$12) \{3, -5\}$$

$$2) \frac{5r^2 - 13r + 1}{2r - 5}$$

$$5) \frac{10}{a - 4}$$

$$9) \{-10\}$$

$$13) \left\{-3, -\frac{4}{3}\right\}$$

$$3) \frac{-14b - 6 + 12b^3 + 15b^2}{6b(4b - 3)}$$

$$6) \frac{n + 8}{5}$$

$$10) \left\{-\frac{5}{4}\right\}$$

$$14) \left\{-\frac{13}{2}, -\frac{8}{3}\right\}$$

$$7) 8k^2$$

$$11) \{1\}$$