

Adding and Subtracting Rational Expressions with Like Denominators

Simplify each expression.

1) $\frac{5x}{12y^3} + \frac{x+2y}{12y^3}$

2) $\frac{x-4y}{30x^2y^3} + \frac{x-4y}{30x^2y^3}$

3) $\frac{3}{5r-25} + \frac{r+2}{5r-25}$

4) $\frac{2}{6b+10} + \frac{b-6}{6b+10}$

5) $\frac{6x-6}{3x^2-14x+15} - \frac{4}{3x^2-14x+15}$

6) $\frac{2n-3}{n^2-8n+12} - \frac{n-1}{n^2-8n+12}$

7) $\frac{3n+15}{n^2+7n+6} - \frac{n+3}{n^2+7n+6}$

8) $\frac{n+5}{4n^2+20n} - \frac{n-5}{4n^2+20n}$

9) $\frac{x-5}{6x^2-18x-60} - \frac{x-2}{6x^2-18x-60}$

10) $\frac{3k-2}{3k^2-19k+6} + \frac{1}{3k^2-19k+6}$

Answers to Adding and Subtracting Rational Expressions with Like Denominators

$$1) \frac{3x + y}{6y^3}$$

$$2) \frac{x - 4y}{15x^2y^3}$$

$$3) \frac{5 + r}{5r - 25}$$

$$4) \frac{-4 + b}{6b + 10}$$

$$5) \frac{2}{x - 3}$$

$$6) \frac{1}{n - 6}$$

$$7) \frac{2}{n + 1}$$

$$8) \frac{5}{2n^2 + 10n}$$

$$9) -\frac{1}{2x^2 - 6x - 20}$$

$$10) \frac{1}{k - 6}$$