

Addition And Subtraction of Rational Fractions

Simplify.

$$1. \frac{7}{12x^3} + \frac{1}{12x^3}$$

$$2. \frac{x}{x-4} - \frac{x+1}{x-4}$$

$$3. \frac{5}{y^2} + \frac{3}{y^3}$$

$$4. \frac{5}{x^2+5x+6} + \frac{2}{x+3}$$

$$5. \frac{2}{y-1} + \frac{2}{y+1}$$

$$6. \frac{y-23}{y^2-y-20} + \frac{2}{y-5}$$

$$7. \frac{4y}{y^2+4y+3} + \frac{2}{y+1}$$

$$8. \frac{12}{15x-3} + \frac{1}{10x-2}$$

$$9. \frac{5}{2ab} + \frac{1}{2a+b}$$

$$10. \frac{3x-4}{6x} - \frac{2x-5}{4x}$$

$$11. \frac{3a}{a-2} - \frac{5a}{a+1}$$

$$12. \frac{x}{x+3} - \frac{3-x}{x^2-9}$$

Answers:

$$1. \frac{2}{3x^3} \quad 2. \frac{-1}{x-4} \quad 3. \frac{5y+3}{y^3} \quad 4. \frac{2x+9}{(x+3)(x+2)} \quad 5. \frac{4y}{(y+1)(y-1)} \quad 6. \frac{3}{y+4} \quad 7. \frac{6}{y+3}$$

$$8. \frac{27}{2(5x-1)} \quad 9. \frac{10a+5b+2ab}{2ab(2a+b)} \quad 10. \frac{7}{12x} \quad 11. -\frac{a(2a-13)}{(a-2)(a+1)} \text{ or } \frac{-2a^2+13a}{(a-2)(a+1)} \quad 12. \frac{x+1}{x+3}$$