

## Adding/Subtracting Rational Expressions

Simplify each expression.

1)  $\frac{2a}{a+6} + \frac{2}{2a+6}$

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

3)  $\frac{4}{2b} - \frac{4}{2b+2}$

4)  $\frac{4}{3} - \frac{5v-3}{2v+8}$

5)  $\frac{5}{k-4} - \frac{4}{k+6}$

6)  $\frac{5}{r+2} + \frac{6r}{r+4}$

7)  $\frac{6p}{3} - \frac{p+4}{3p^2-33p+90}$

8)  $\frac{5}{2k-3} + \frac{4}{5k+5}$

9)  $\frac{3v}{4v-16} + \frac{3}{v+3}$

10)  $\frac{5}{6x^2-9x-27} - \frac{5x}{2}$

11)  $\frac{5x}{2x} - \frac{6x+5}{3x^2-12}$

12)  $\frac{x+6}{2x^2-2x-4} - \frac{2}{5x^2}$

## Answers to Adding/Subtracting Rational Expressions (ID: 1)

$$1) \frac{2a^2 + 7a + 6}{(a+6)(a+3)}$$

$$5) \frac{k+46}{(k-4)(k+6)}$$

$$8) \frac{33k+13}{5(2k-3)(k+1)}$$

$$11) \frac{15x^2 - 70 - 12x}{6(x-2)(x+2)}$$

$$2) \frac{-14x - 1 - 3x^2}{2(x+5)}$$

$$6) \frac{17r + 20 + 6r^2}{(r+4)(r+2)}$$

$$9) \frac{3v^2 + 21v - 48}{4(v-4)(v+3)}$$

$$12) \frac{5x^3 + 26x^2 + 4x + 8}{10x^2(x-2)(x+1)}$$

$$3) \frac{2}{b(b+1)}$$

$$7) \frac{6p^3 - 66p^2 + 179p - 4}{3(p-6)(p-5)}$$

$$10) \frac{10 - 30x^3 + 45x^2 + 135x}{6(x-3)(2x+3)}$$

$$4) \frac{-7v + 41}{6(v+4)}$$