

## Rational Expressions – Worksheet 2

Simplify:

1.  $\frac{3a-4}{a+b} - \frac{3}{a+b}$

2.  $\frac{6}{3a} - \frac{2}{9a}$

3.  $\frac{10}{3x} + \frac{8}{12x^2}$

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

5.  $\frac{-3a}{a^2-2a} - \frac{a}{a^2-4}$

6.  $\frac{2}{x^2+7x+10} + \frac{5}{x^2+3x-10}$

7.  $\frac{c(c-3)}{c^2-25} \cdot \frac{c^2+4c-5}{c^2-4c+3}$

8.  $\frac{(m-3)^2}{m^2-6m+9} \cdot \frac{m^3-9m}{m^2-9}$

9.  $\frac{x^4y^2z^3}{x^2-4} \div \frac{x^8y^4z}{x+2}$

10.  $\frac{1}{x+3} \div \frac{2x}{x^2+5x+6}$

11.  $\frac{c^3+3c^2}{(c+5)^2} \cdot \frac{c^2-25}{c^2}$

12.  $\frac{x^2+5x+6}{x+7} \div \frac{x^2-5x-24}{x^2-x-56} \cdot \frac{x+3}{x+2}$

### ANSWERS

1)  $\frac{3a-7}{a+b}$     2)  $\frac{16}{9a}$     3)  $\frac{10x+2}{3x^2}$     4)  $\frac{y-5}{(y+1)(y-1)}$     5)  $\frac{-2(2a+3)}{(a-2)(a+2)}$

6)  $\frac{7x+6}{(x+5)(x+2)(x-2)}$     7.)  $\frac{c}{c-5}$     8.)  $m$     9.)  $\frac{z^2}{x^4y^2(x-2)}$

10.)  $\frac{x+2}{2x}$     11.)  $\frac{(c+3)(c-5)}{c+5}$     12.)  $x+3$