

# WAY COOL Algebra



Simplify each Rational expression.

1) 
$$\frac{14m^3}{7m}$$

2) 
$$\frac{9a}{18a^3}$$

3) 
$$\frac{5x^5y}{65x^2y^4}$$

4) 
$$\frac{60x^2y^4z^6}{20x^2y^5z^2}$$

5) 
$$\frac{x+3}{x}$$

Simplify each Rational expression.

$$6) \frac{(x+3)(x-2)(3x-7)}{(x+2)(3x-7)(x+3)}$$

$$7) \frac{(k-5)^3 (k+7)^2}{(k-5)(k+7)^6}$$

$$8) \frac{5x^7 y^3 (x+8)^3}{15x^2 y (x+8)^8}$$

$$9) \frac{x^2 + 8x}{8x + 64}$$

Simplify each Rational expression.

10)

$$\frac{7x}{14x+21}$$

11)

$$\frac{3m^2}{3m+15}$$

12)

$$\frac{3x+15}{6x-3y}$$

13)

$$\frac{6x+18}{12x-6y}$$

14)

$$\frac{6x^2+9x}{3xy-12x^2}$$

15)

$$\frac{x+4}{2x+8}$$

Simplify each Rational expression.

16) 
$$\frac{x+3}{3x+9}$$

17) 
$$\frac{3x-12}{x^2-4x}$$

18) 
$$\frac{xy+2y}{7x+14}$$

19) 
$$\frac{x^2-16}{x^2+11x+28}$$

20) 
$$\frac{x^2-4x-60}{x^2+4x-12}$$

21) 
$$\frac{a^2+2a}{a^2+3a+2}$$

Simplify each Rational expression.

22)

$$\frac{2x^2 - 14x}{x^2 - 10x + 21}$$

23)

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

24)

$$\frac{2x^2 - 3x - 20}{4x^2 + 20x + 25}$$