

## Exponent Rules (p 444)

p 445

p 454

p 458

$$x^3 \cdot x^4 = x^7$$

$$x^3 y^4 = x^3 y^4$$

$$(x^3)^4 = x^{12}$$

$$\frac{x^6}{x^2} = x^4$$

$$x^{-3} = \frac{1}{x^3}$$

$$x^0 = 1, \quad x \neq 0$$

$$(x+y)^2 \neq x^2 + y^2$$

Ex:

$$\left( \underline{3}x^2 \underline{y}^3 \underline{z} \right) \left( \underline{7}x \underline{y}^6 \underline{z} \right)$$

$$21x^3y^9z^2$$

$$\left( \overset{1}{2}x^3 \overset{1}{y}^6 \overset{1}{z} \right)^3 \left( \overset{1}{3}x \overset{1}{y}^4 \overset{1}{z}^6 \right)^2$$

$$\overset{3}{2}x^9 \overset{3}{y}^{18} \overset{3}{z}^3$$

$$\overset{2}{3}x^2 \overset{2}{y}^8 \overset{2}{z}^{12}$$

$$\underline{8}$$

$$\underline{9}$$

$$72x^{11}y^{26}z^{15}$$

$$(3x^2yz^3)^4 (2xy^5z^7)^4$$

$$3^4 x^8 y^4 z^{12} \quad 2^4 x^4 y^{20} z^{28}$$

81

16

$$1296 x^{12} y^{24} z^{40}$$

$$(12x^3 - 6x^2 + 5) + (3x^3 - 10x - 13)$$

$$15x^3 - 6x^2 - 10x - 8$$

$$(12x^3 - 6x^2 + 5) - (3x^3 - 10x - 13)$$

$$12x^3 - 6x^2 + 5 \quad -3x^3 + 10x + 13$$

$$9x^3 - 6x^2 + 10x + 18$$

$$(2x+3)(x^2-5x+6)$$

$$2x^3 - 10x^2 + 12x$$

$$3x^2 - 15x + 18$$

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$$2x^3 - 7x^2 - 3x + 18$$