

Shannon in Study Hall at Cartier

Wed + Fri 9-10

Tues + Thurs 10-11

1st Module: Factoring and Algebraic Fractions

Factoring Method # 1 :

Removing the Greatest Common Factor

e.g.1

$$3x^2 + 6xy$$

ANS

$$3x (x + 2y)$$

e.g.2

$$10x^4y^3 + 4x^3y^2 - 2x^2y^2$$

$$2x^2y (5x^2y^2 + 2x - y)$$

If the letter is everywhere it'll be the smallest exponent

e.g. ³
~~1~~ 2 4

b · b · b

$$\boxed{4} a^3 b^2 c^4 - 8 a^2 b^3 c^3 + 6 b^3 c - 12 a^5 b^2 c^4$$

$$\boxed{2b^2c} \left(2a^3c^3 - 4a^2bc^2 + 3b - 6a^5c^3 \right)$$

e.g. 4

$$120 p^4 q^2 r^3 - 180 p^3 q^2 r^2 + 60 p^4 q^6 + 50^2 q^3$$

$$0 q^2 \left(120 p^3 q^2 r^3 - 180 p^2 q^2 r^2 + 6 p^4 q^4 + 50 q^3 \right)$$

e.g.5

$$4x^5 + 12x^4 + 8x^3$$

$\begin{array}{ccc} \times\times\times\times\times & \times\times\times\times & \times\times\times \end{array}$

$$4x^3 (x^2 + 3x + 2)$$

e.g.6

$$-3m^3n - 7m^3r + 8m^3rt$$

$$m^3 (-3n - 7r + 8rt)$$

OR

$$-m^3 (3n + 7r - 8rt)$$

When you remove the minus sign
all of the signs in the brackets
 will be the opposite of what
 they were in the original
 polynomial!

e.g. 7

$$-2ab^3 - 4b^3c - 12b^3d$$

$$\underline{2b^3} (-a - 2c - 6d)$$

OR

$$\underline{-2b^3} (+a + 2c + 6d)$$

e.g. 8

$$4x^4 - 2x$$

$$2x(2x^3 - 1)$$

e.g. 9

$$3xy - 3x^4y^2$$

$$3xy(1 - x^3y)$$

e.g. 10

$$a^2b^3 + a^2b^2 - a^2b$$

$$a^2b(b^2 + b - 1)$$

Do ① Worksheet #1

(Answers are in back)

② Quiz #1