

Lesson 3 - DISTRIBUTIVE PROPERTY. COMMON FACTORING

CTOCE 9

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for any values of a, b and c the following DISTRIBUTIVE PROPERTY is true

the "backwards" operation is called COMMON FACTORING

in order to multiply a monomial by a polynomial, multiply a monomial by every term inside the polynomial, then simplify by collecting like terms

$$3a(a+2b-7) = 3a \cdot a + 3a \cdot 2b - 3a \cdot 7 = 3a^{2} + 6ab - 21a$$

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(+ c) = axb + axc+ ac

ab + ac = a(b + c)



Try It Yourself

$4a^{2}(a^{3}-3a+5)+2a(6a^{2}-10a)$

 $2y(y^2 - 4y^5 - 1) - 3(y^3 + 5y)$

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if all terms within a polynomial contain a common value, we can take it outside of brackets. The process is called "common factoring"

$$ab + 2ac - 3ad = a(b + 2c - 3d)$$

 $6a^{2}b + 3b - 12bc^{3} = 3b \cdot 2a^{2} + 3b \cdot 1 - 3b \cdot 4c$

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$$c^3 = 3b(2a^2 + 1 - 4c^3)$$

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