Algebra I | Tuesday 2-19-13 | Class Notes

Ch 6-5 Multiplying Polynomials

(Ex) Pg 422-426

(1) (A) $(5x^2)(4x^3)$

(B) $(-3x^3y^2)(4xy^5)$

(C) $(\frac{1}{2}a^3b)(a^2c^2)(6b^2)$

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(2) (A) $5(2x^2+x+4)$

(B) $2x^2y(3x-y)$

(C) $4a(a^2b+2b^2)$

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* (Ex) $(x+3)(x+2)$

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* (3) (A) $(x+2)(x-6)$

* (B) $(x+6)^2$

* (C) $(3a^2-b)(a^2-2b)$

* } binomial times binomial

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

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(4) (A) $(x+2)(x^2-5x+4)$

(B) $(3x-4)(-2x^3+5x-6)$

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

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

(1)(A) $(5x^2)(4x^3) =$

$20x^5$

(B) $(-3x^3y^2)(4xy^5)$

$-12x^4y^7$

(C) $\left(\frac{1}{2}a^3b\right)(a^2c^2)(6b^2)$

$3a^5b^3c^2$

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(2)(a) $5(2x^2+x+4)$

$10x^2+5x+20$

(b) $2x^2y(3x-y)$

$6x^3y-2x^2y^2$

(c) $4a(a^2b+2b^2)$

$4a^3b+8ab^2$

quartic binomial.

Ex $(x+3)(x+2)$

HORIZONTAL FORM

$x^2+2x+3x+6$

x^2+5x+6

VERTICAL FORM

x^2+2x

$3x+6$

x^2+5x+6

3A $(x+2)(x-b)$

$x^2-xb+2x-2b$

3b $(x+b)^2$

$(x+b)(x+b)$

$x^2+bx+bx+b^2$

$x^2+2bx+b^2$

(3c) $(3a^2 - b)(a^2 - 2b)$

$3a^4 - 6a^2b - a^2b + 2b^2$

$\boxed{3a^4 - 7a^2b + 2b^2}$

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

$10x^3 + 50x^2 - 30x$

$+ 6x^2 + 30x - 18$

$\boxed{10x^3 + 56x^2 - 18}$

(4A) $(x+2)(x^2 - 5x + 4)$

$x^3 - 5x^2 + 4x$

$+ 2x^2 - 10x + 8$

$\boxed{x^3 - 3x^2 - 6x + 8}$

(4b) $(3x-4)(-2x^3+5x-6)$

$-6x^4+15x^2-18x$

$-20x+8x^3+24$

$$\boxed{-6x^4+8x^3+15x^2-38x+24}$$

(4c) $(x-2)^3$

$(x-2)(x-2)(x-2)$

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

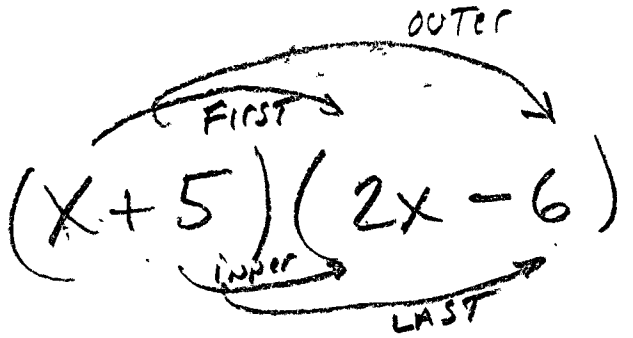
$(x^2-4x+4)(x-2)$

x^3-4x^2+4x

$-2x^2+8x-8$

$$\boxed{x^3-6x^2+12x-8}$$

Ex



FOIL

F I R S T
O U T E R
I N N E R
L A S T

$$2x^2 - 6x$$
$$+10x - 30$$

$$\boxed{2x^2 + 4x - 30}$$