

Multiplying Polynomials

$2x^3(3x-5)$
 $6x^4 - 10x^3$

Ex:
 $-3x^2(5x^4 - 8x^2 + 5x - 12)$
 $-15x^6 + 24x^4 - 15x^3 + 36x^2$

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

Ex:
 $2x^4(x^3 - 3x^2 + 5x - 7)$
 $2x^7 - 6x^6 + 10x^5 - 14x^4$

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$(x-3)(x+5)$
 $x^2 + 5x - 3x - 15$
 $x^2 + 2x - 15$

Ex:
 $(x-3)(x^2 + x + 5)$
 $x^3 + x^2 + 5x - 3x^2 - 3x - 15$
 $x^3 - 2x^2 + 2x - 15$

Ex:
 $(x-4)(3x^2 + 2x - 7)$
 $3x^3 + 2x^2 - 7x - 12x^2 - 8x + 28$
 $3x^3 - 10x^2 - 15x + 28$

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Ex:
 $(y^2 + 3y - 4)(y^2 - 8y + 5)$
 $y^4 - 8y^3 + 5y^2 + 3y^3 - 24y^2 + 15y - 4y^2 + 32y - 20$
 $y^4 - 5y^3 - 23y^2 + 47y - 20$

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Multiplying Polynomials

Ex:
 $2x(x-3)$
 $2x^2 - 6x$

Ex:
 $3x^2(x^2 - 4x + 5)$
 $3x^4 - 12x^3 + 15x^2$

Ex:
 $x^2y(3x^2 - 4xy - 2y^2)$
 $3x^4y - 4x^3y^2 - 2x^2y^3$

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Ex:
 $(x-3)(x+5)$
 $x^2 + 5x - 3x - 15$
 $x^2 + 2x - 15$

Ex:
 $(x-3)(x^2 + x + 5)$
 $x^3 + x^2 + 5x - 3x^2 - 3x - 15$
 $x^3 - 2x^2 + 2x - 15$

Ex:
 $(2x-5)(x^2 - 3x + 7)$
 $2x^3 - 6x^2 + 14x - 5x^2 + 15x - 35$
 $2x^3 - 11x^2 + 29x - 35$

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Ex:
 $(x^2 - 4x + 2)(x^2 + 3x - 9)$
 $x^4 + 3x^3 - 9x^2 - 4x^3 - 12x^2 + 36x - 2x^2 + 6x - 18$
 $x^4 - x^3 - 19x^2 + 42x - 18$

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Multiplying Polynomials

Ex: $3x(x-5)$ Ex: $2x^3(x^2-4x-8)$

$3x^2-15x$ $2x^5-8x^4-16x^3$

Ex: $x^2y(2x^3-4xy+3y^2)$

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

Mar 9-11:02 AM

Ex: $(x-3)(x+5)$ Ex: $(x-3)(x^2+x+5)$

$x^2+5x-3x-15$ $x^3+x^2+5x-3x^2-3x-15$

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

Ex: $(2x-3)(x^2+4x-7)$

$2x^3+8x^2-14x-3x^2-12x+21$

$2x^3+5x^2-26x+21$

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Ex: $(x^2-4x+8)(2x^2+x-5)$

~~$2x^4+x^3-5x^2-8x^3-4x^2+20x+16x^2+8x-40$~~

$2x^4-7x^3+7x^2+28x-40$

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Multiplying Polynomials

Ex: $2x(3x-5)$ Ex: $-3x^2(5x^3+4x^2-9)$

$6x^2-10x$ $-15x^5-12x^4+27x^2$

Ex: $x^2y(3x^2-8xy+9y^2)$

$3x^4y-8x^3y^2+9x^2y^3$

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Ex: $(x-5)(x+7)$ Ex: $(x-5)(x^2+x+7)$

$x^2+7x-5x-35$ $x^3+x^2+7x-5x^2-5x-35$

$x^2+2x-35$ $x^3-4x^2+2x-35$

Ex: $(2x-4)(x^2-7x+9)$

$2x^3-14x^2+18x-4x^2+28x-36$

$2x^3-18x^2+46x-36$

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Ex: $(x^2-5x+3)(x^2+7x-4)$

~~$x^4+7x^3-4x^2-5x^3-35x^2+20x+3x^2+21x-12$~~

$x^4+2x^3-36x^2+41x-12$

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