

$$3x \cdot 2x = 6x^2$$

$$3x^2 \cdot 2x^3 = 6x^5$$

$$4x^3(-5x^3) = -20x^6$$

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

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

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Multiplying Polynomials:

$6v(2v+3)$  Distribute  
 $12v^2+18v$  outside term to  
 each term on  
 the inside of the  
 parentheses

$(2n+2)(6n+1)$   
 $12n^2+2n+12n+2$   
 $12n^2+14n+2$

F- First  
 O- Outer  
 I- Inner  
 L- Last

$(a+b)^2 = a^2+2ab+b^2$   
 $(2x+3)^2 = 4x^2+2(2x)(3)+9$   
 $4x^2+12x+9$

$(2x+3)(2x+3)$   
 $4x^2+6x+6x+9$   
 $4x^2+12x+9$

$(a-b)(a+b)$  Difference of Squares  
 $(x-5)(x+5) = x^2-25$   
 $x^2+5x-5x-25$   
 $x^2-25$

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Factoring Polynomials:

$b^2 + 8b + 7$

$ax^2 + bx + c \leftarrow \text{Standard Form}$

$(b+1)(b+7)$

$b$	$c$	$\text{Factor}$
8	7	↓
8	1·7	
-8	-1·-7	

$\leftarrow \text{Add}$

  

$m^2 + m - 90$

$(m-9)(m+10)$

$m^2 + 10m - 9m - 90$

$m^2 + m - 90$

1	-90
1	-9·10
-27	3·-30
43	-2·45
-1	-10·9

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