Find the Product

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

$1x^5(2)^0 \quad 5x^4(2)^1 \quad 10x^3(2)^2 \quad 10x^2(2)^3 \quad 5x(2)^4 \quad 1(2)^5$

$x^5 + 10x^4 + 40x^3 + 80x^2 + 80x + 32$

B) $(3x+2)^6 =$

$1(3x)^6 / 6(3x)^5 2^1 / 15(3x)^4 2^2 / 20(3x)^3 2^3 / 15(3x)^2 2^4 / 6(3x)^1 2^5 / 1 2^6$

27 (8) 15(9)(16) 6(3)(32)

$729x^6 + 2916x^5 + 4860x^4 + 4320x^3 + 2160x^2 + 576x + 64$

$n=4$	C) $(x^3-3)^4=$ $1(x^3)^4 \quad 4(x^3)^3(-3)^1 \quad 6(x^3)^2(-3)^2 \quad 4(x^3)^1(-3)^3 \quad 1(-3)^4$ $x^{12}-12x^9+54x^6-108x^3+81$
	D) $(4x+3y)^6=$ $1(4x)^6 \quad 6(4x)^5(3y) \quad 15(4x)^4(3y)^2 \quad 20(4x)^3(3y)^3 \quad 15(4x)^2(3y)^4 \quad 6(4x)(3y)^5 \quad 1(3y)^6$ $4096x^6+18432x^5y+34560x^4y^2+34560x^3y^3+19440x^2y^4+5832xy^5+729y^6$
	E) $\cancel{(4+7)^2}=(x-2y)^3$ $1(x)^3(-2y)^0 \quad 3(x)^2(-2y)^1 \quad 3(x)(-2y)^2 \quad 1(-2y)^3(x)^0$ $x^3-6x^2y+12xy^2-8y^3$

Find the coefficient of the term that is to the degree of 6

A) $(x^2-1)^{12} =$

x^2

-1

$924(x^2)^6(-1)^6$

$\boxed{924}x^{12}$

Find the coefficient of the term that is to the degree of 5

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

$792(x^5)(4)^7$

$12,976,128$

Find the coefficient of the ax^4y^4 term

C) $(2x-3y)^8 =$

$70(2x)^4(-3y)^4$

$70(16)(81)$

$90,720$

	Find the 6th degree coefficient of $(2x-5y)^7$ $7(2x)^6(-5y)^1$ -2240