



Example : #28 from page 679.

$$\begin{aligned}(x-3y)^5 &= [x+(-3y)]^5 \\ &= x^5 + \binom{5}{1}x^4(-3y) + \binom{5}{2}x^3(-3y)^2 + \binom{5}{3}x^2(-3y)^3 + \binom{5}{4}x(-3y)^4 + (-3y)^5 \\ &= x^5 + 5x^4(-3y) + 10x^3(-3y)^2 + 10x^2(-3y)^3 + 5x(-3y)^4 + (-3y)^5 \\ &= \boxed{x^5 - 15x^4y + 90x^3y^2 - 270x^2y^3 + 405xy^4 - 243y^5}\end{aligned}$$

To find the  $r$ th term of  $[(1st) + (2nd)]^n$  :

$$\binom{n}{r-1} (1st)^{n-r+1} (2nd)^{r-1}$$

Example: #44 p 679.

$(x^3+y^2)^8$ : 6th term

$$\binom{8}{5} (x^3)^3 (y^2)^5 = 56x^9y^{10}$$

Assignment: Ex 8.5 (odd)

Test  $\begin{cases} 4/29/04 & \text{for TTh class.} \\ 4/28/04 & \text{for MW classes} \end{cases}$

Review due by end of day Monday, 4/26/04.

Final Exam Review on Website.