AAT

Cubing Binomials

from Pascal's Δ . . .

1 row 0
1 1 row 1
1 2 1 row 2
1 3 3 1 row 3 ←

ex 1 $(\overset{a}{x}+\overset{b}{2})^3$

$a^3\,b^0 \quad a^2\,b \quad a\,b^2 \quad a^0\,b^3$

$= 1x^3 2^0 + 3x^2 2^1 + 3x 2^2 + 1x^0 2^3$

$= x^3 + 6x^2 + 12x + 8$

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

$= 1(2x)^3(-3)^0 + 3(2x)^2(-3) + 3(2x)^1(-3)^2 + 1(2x)^0(-3)^3$

$= 8x^3 - 36x^2 + 54x - 27$