

Binomial Expansion Investigation

This investigation serves to help us discover patterns that will allow us to more efficiently expand binomials. The patterns you notice will be very significant!

Step 1

On notebook paper, use the distributive property to progressively expand each binomial. Neatly, write each result (in standard form) on this outline. Wherever there is a coefficient of "1", write it in, so it is visible.

$$(a + b)^0 =$$

$$(a + b)^1 =$$

$$(a + b)^2 =$$

$$(a + b)^3 =$$

$$(a + b)^4 =$$

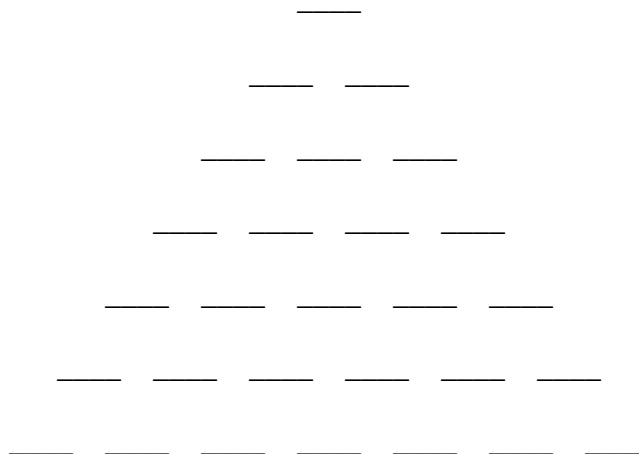
This pattern continues ...

Step 2:

Use a highlighter to highlight all of the coefficients, including coefficients of "1".

Step 3:

Use the coefficients from each expanded binomial to fill in the blanks of the pyramid below.



You shoul d notic e
