

Name: _____ No. _____
 Serafino · Precalculus S2

Per: _____ Date: _____
 M T W R F

9C-R

Binomial Theorem / Expansion

Review

Show all set ups/work for maximum credit.

1. Recall Pascal's Triangle...

- a. What is the 1st row? _____
- b. What is the 6th row? _____
- c. What is the 3rd term in the 7th row? _____
- d. ${}_{11}C_4$ is the _____ row, _____ term.
- e. The _____ row has 18 terms.
- f. In the 25th row, the 17th term = the _____ term.

2. Consider the expanded polynomial of $(a + b)^5$...

- a. Number of terms: _____ First term: _____ Last term? _____
- b. The set-up for the 5th term is: _____ C _____ (a) — (b) —

3. In the expansion of $(2s - t^2)^{15}$...

- a. The _____th term contains $s^9 t$ —
- b. 12th term: _____
- d. 13th term: _____

4. Find the 3rd term for the following polynomials:

- a. $\left(\frac{3}{4}p + 2\sqrt{q}\right)^4$ _____
- b. $(x^3 - x^2)^9$ _____

5. Fully expand the following:

- a. $(x - 3)^3 =$ _____
- b. $(2x^2 + y)^2 =$ _____

Not a bonus: What is the constant term when $\left(x^2 - \frac{2}{x}\right)^3$ is expanded.