Math 3 4.6 Polynomial Expansion Unit 4

*SWBAT expand and simplify polynomials using Pascal’s Triangle.*

**Example 1:** Rewrite each of the problems in expanded form and then simplify the polynomial.

1. f(x) = x + 1
2. f(x) = (x + 1)2
3. f(x) = (x + 1)3

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| Pascal’s Triangle |
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Expanding polynomials might seem easy, but imagine if you had a polynomial raised to the 10th degree, or the 100th. Pascal’s Triangle is a way of expanding polynomials without having to foil a bunch of times.

**Example 1:** Expand and simplify: (x + y)5

**Example 2:** Expand and simplify: (2x - y)3

**Example 3:** Expand and simplify: (2m – 1)4

**Example 4:** Expand and simplify: (x – 3y)5