SECONDARY MATH 3

**CORE STANDARDS**

A.APR.5

LESSON

**1-4**

OBJECTIVE **1.** I can expand binomials.

NOTES Binomial Theorem: For any positive integer *n*,

$\left(a+b\right)^{n}=\left(\begin{array}{c}n\\0\end{array}\right)a^{n}+\left(\begin{array}{c}n\\1\end{array}\right)a^{n-1}b+…+\left(\begin{array}{c}n\\r\end{array}\right)a^{n-r}b^{r}+…+\left(\begin{array}{c}n\\n\end{array}\right)b^{n}$ , where $\left(\begin{array}{c}n\\r\end{array}\right)= \_{n}C\_{r}$.

Pascal’s Triangle can also be used to determine the coefficient.



EXAMPLES Expand

1. $\left(2x+4\right)^{3}$
2. $\left(3x-2y\right)^{5}$

PRACTICE **1-4** NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 [SHOW YOUR WORK]

Expand the following:

1. $\left(x+3\right)^{6}$
2. $\left(x-2\right)^{7}$
3. $\left(2x-1\right)^{5}$
4. $\left(5x+y\right)^{6}$
5. $\left(4x-3y\right)^{5}$
6. $\left(3x+2y\right)^{4}$