Name _____ Date _____

Ms. Schmidt Pre-Calculus

# Binomial Expansion and nth term

Kickoff

1) Using Pascal's Triangle, expand the following: $(a+b)^6$

2) State if the following functions are inverses. (algebraically)

$f(x) = \frac{8+7x}{4}$

$g(x) = \frac{4x-8}{7}$

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Finding nth terms

Steps

1)

2)

3)

4)

1) Find the coefficient of the $y^2$ in the expansion of $(2y^2-1)^6$

2) Find the coefficient of $y^8x^3$ in the expansion of $(y^4-3x)^5$

3) Find the coefficient of $x^2y^3$ in the expansion of $(x^2 - 3y)^4$

4) Find the $4^{th}$ term in the expansion of $(1 - 5x^3)^3$

5) Find the $5^{th}$ term in the expansion of $(1 - 4m^2)^4$

6) Find the $2^{nd}$ term in the expansion of $(1 - 3y^4)^4$

7) Find the $3^{rd}$ term in the expansion of $(2x + 3)^5$

8) Find the seventh term in the expansion of $(4x - 6y)^9$.

9) Find the sixth term in the expansion of $(4x - 5y)^8$.