Finding a Specific Coefficient Using Binomial Expansion

Name _____

Date _____ Period _____

Given the binomial expansion of $(x + a)^n$, the coefficient of x^j is defined as

$$\binom{n}{n-j} a^{n-j} \cdot x^j$$

Find the coefficient of x^6 from the expansion of $(x + 2)^9$.

Given the binomial expansion of $(x + a)^n$, the coefficient of x^j is defined as

$$\binom{n}{n-j} a^{n-j} \cdot x^j$$

Find the coefficient of x^3 from the expansion of $(x - 3)^7$.

Given the binomial expansion of $(x + a)^n$, the coefficient of x^j is defined as

$$\binom{n}{n-j} a^{n-j} \cdot x^j$$

Find the coefficient of y^2 from the expansion of $(2y + 4)^6$.