Name: _____ Date: _____

Section 11.3 Extra Practice

1. List the values in the given row of Pascal's triangle.
   a) row 3
   b) row 5
   c) row 7

2. Express each circled term in the given row of Pascal's triangle as a combination.
   a) 1 4 ⑥ 4 1
   b) 1 7 21 35 ㉟ 21 7 1
   c) 1 10 45 120 210 252 210 120 ㊺ 10 1

3. How many terms are in the expansion of each expression?
   a) $(x - 5)^7$
   b) $(2x + y)^9$
   c) $(1 - 2t)^n$

4. Use the binomial theorem to expand.
   a) $(a + b)^4$
   b) $(x - 2)^5$
   c) $(4 + y)^3$

5. Expand and simplify using the binomial theorem.
   a) $(3x - 4)^3$
   b) $(2x + 5y)^4$
   c) $(a - 2b)^5$

6. Determine the simplified value of the specified term.
   a) the fifth term of $(x - y)^7$
   b) the eighth term of $(2a + 3b)^8$
   c) the middle term of $(5x - 3)^{10}$

7. Express each expansion in the form $(a + b)^n$, $n \in N$.
   a) $_5C_0x^5 - _5C_1x^4y + _5C_2x^3y^2 - _5C_3x^2y^3 + _5C_4xy^4 - _5C_5y^5$
   b) $_3C_0(8) + _3C_1(4)x + _3C_2(2)x^2 + _3C_3x^3$

8. Determine the middle term of $\left(3 - \dfrac{y}{2}\right)^6$.

9. In the expansion of $(2a - 3b)^6$, determine the coefficient of the term containing a^4b^2.

10. Given the binomial $\left(3x^3 + \dfrac{1}{x^3}\right)^6$, determine the constant term.