

## Binomial Theorem Practice

Date \_\_\_\_\_ Period \_\_\_\_\_

**Expand completely.**

1)  $(1 + 2a)^5$

2)  $(2x + 1)^3$

3)  $(2a - 1)^4$

4)  $(u + v)^4$

5)  $(4v - 1)^4$

6)  $(b - 3a)^3$

**Find each term described.**

7) 3rd term in expansion of  $(x - y)^4$

8) 2nd term in expansion of  $(2u + v)^3$

9) 5th term in expansion of  $(2 - y)^4$

10) 4th term in expansion of  $(x + y)^3$

**Find each coefficient described.**

11) Coefficient of  $xy^2$  in expansion of  $(x - y)^3$

12) Coefficient of  $x^2$  in expansion of  $(x - 4)^3$

13) Coefficient of  $a^2$  in expansion of  $(a - 2)^4$

14) Coefficient of  $u^2v$  in expansion of  $(u + v)^3$

## Answers to Binomial Theorem Practice

1)  $1 + 10a + 40a^2 + 80a^3 + 80a^4 + 32a^5$

2)  $8x^3 + 12x^2 + 6x + 1$

3)  $16a^4 - 32a^3 + 24a^2 - 8a + 1$

4)  $u^4 + 4u^3v + 6u^2v^2 + 4uv^3 + v^4$

5)  $256v^4 - 256v^3 + 96v^2 - 16v + 1$

6)  $b^3 - 9b^2a + 27ba^2 - 27a^3$

7)  $6x^2y^2$

8)  $12u^2v$

9)  $y^4$

10)  $y^3$

11) 3

12) -12

13) 24

14) 3