

## The Binomial Theorem

**Find each coefficient described.**

1) Coefficient of  $x^2$  in expansion of  $(2 + x)^5$

2) Coefficient of  $x^2$  in expansion of  $(x + 2)^5$

3) Coefficient of  $x$  in expansion of  $(x + 3)^5$

4) Coefficient of  $b$  in expansion of  $(3 + b)^4$

5) Coefficient of  $x^3y^2$  in expansion of  $(x - 3y)^5$

6) Coefficient of  $a^2$  in expansion of  $(2a + 1)^5$

**Find each term described.**

7) 2nd term in expansion of  $(y - 2x)^4$

8) 4th term in expansion of  $(4y + x)^4$

9) 1st term in expansion of  $(a + b)^5$

10) 2nd term in expansion of  $(y - x)^4$

**Expand completely.**

11)  $(2m - 1)^4$

12)  $(x - y)^3$

13)  $(x^4 - y)^5$

14)  $(2x^3 + 1)^5$

15)  $(y - x^2)^3$

16)  $(y^3 - 4x)^3$