

**A2.A.36: Binomial Expansions 4: Apply the binomial theorem to expand a binomial and determine a specific term of a binomial expansion**

- 1 What is the fifth term in the expansion of  $(x - 2)^6$ ?
- 2 The fourth term in the expansion of  $(h + t)^6$  is
- 3 What is the last term in the expansion of  $(x - 2)^5$ ?
- 4 The third term of the expansion of  $(x - 3)^6$  is
- 5 What is the fourth term of the expansion  $(a + b)^4$ ?
- 6 What is the fourth term of the expansion  $(a + b)^5$ ?
- 7 What is the third term in the expansion of  $(a - 3b)^5$ ?
- 8 What is the 7th term in the expansion of  $(2x - y)^7$ ?
- 9 The fifth term in the expansion of  $(2x - y)^6$  is
- 10 What is the third term in the expansion of  $(a - 2b)^8$ ?
- 11 The last term in the expansion of  $(x + 3y)^4$  is
- 12 What is the last term in the expansion of  $(2x - 3y)^5$ ?
- 13 The third term of the expansion  $(2x - 3y)^5$  is
- 14 What is the fourth term in the expansion of  $(x - 2y)^5$ ?
- 15 What is the third term in the expansion of  $(2x - 3y)^3$ ?
- 16 What is the third term in the expansion of  $(x - 2y)^5$ ?
- 17 What is the fifth term in the expansion of  $(3a - b)^6$ ?

- 18 The fifth term of the expansion of  $(1 - \pi)^6$  is
- 19 What is the middle term in the expansion of  $(3x - 2y)^4$ ?
- 20 What is the middle term in the expansion  $(x - 3y)^4$ ?
- 21 What is the third term in the expansion of  $(x + 2y)^5$ ?
- 22 What is the third term in the expansion of  $(a - 3b)^4$ ?
- 23 What is the fourth term of the expansion  $(2x - y)^7$ ?
- 24 What is the third term in the expansion  $(2x - y)^3$ ?
- 25 What is the third term in the expansion of  $(2x - y)^4$ ?
- 26 What is the third term in the expansion of  $(a - 2b)^6$ ?
- 27 What is the second term in the expansion of  $\left(x^2 + \frac{x}{2}\right)^5$ ?
- 28 What is the sum of the coefficients in the expansion of  $(a + b)^5$ ?

# **A2.A.36: Binomial Expansions 4: Apply the binomial theorem to expand a binomial and determine a specific term of a binomial expansion**

## **Answer Section**

1 ANS:

$${}_6C_4x^2(-2)^4$$

REF: 010425siii

2 ANS:

$${}_6C_3h^3t^3$$

REF: 068534siii

3 ANS:

$$-32$$

REF: 088522siii

4 ANS:

$$135x^4$$

REF: 088933siii

5 ANS:

$$4ab^3$$

REF: 069032siii

6 ANS:

$$10a^2b^3$$

REF: 089834siii

7 ANS:

$$90a^3b^2$$

REF: 068035siii

8 ANS:

$$14xy^6$$

REF: 068133siii

9 ANS:

$$60x^2y^4$$

REF: 018422siii

10 ANS:

$${}_8C_2(a)^6(-2b)^2$$

REF: 068419siii

11 ANS:  
 $81y^4$

REF: 018532siii

12 ANS:  
 $-243y^5$

REF: 018630siii

13 ANS:  
 $720x^3y^2$

REF: 088630siii

14 ANS:  
 $-80x^2y^3$

REF: 088734siii

15 ANS:  
 $54xy^2$

REF: 068935siii

16 ANS:  
 $40x^3y^2$

REF: 089034siii

17 ANS:  
 $135a^2b^4$

REF: 019531siii

18 ANS:  
 $15\pi^4$

REF: 019632siii

19 ANS:  
 $216x^2y^2$

REF: 019732siii

20 ANS:  
 $54x^2y^2$

REF: 069835siii

21 ANS:  
 $40x^3y^2$

REF: 010033siii

22 ANS:

$$54a^2b^2$$

REF: 060031siii

23 ANS:

$$-560x^4y^3$$

REF: 080034siii

24 ANS:

$$6xy^2$$

REF: 010133siii

25 ANS:

$$24x^2y^2$$

REF: 060233siii

26 ANS:

$$60a^4b^2$$

REF: 010332siii

27 ANS:

$$\frac{5x^9}{2}$$

REF: 088427siii

28 ANS:

$$32$$

REF: 080334siii