

**A2.A.36: Binomial Expansions 6: Apply the binomial theorem to expand a binomial and determine a specific term of a binomial expansion**

- 1 What is the middle term of the expansion  $(\sin x + 2)^4$ ?
- 2 The third term in the expansion of  $(\sin x - 1)^3$  is
- 3 What is the fourth term in the expansion of  $(\cos x + 3)^5$ ?
- 4 What is the third term in the expansion of  $(\cos x - 1)^4$ ?
- 5 What is the middle term in the expansion of  $(2 \sin x + \cos y)^4$ ?
- 6 What is the third term in the expansion of  $(\sin x - \cos y)^5$ ?
- 7 What is the fifth term in the expansion of  $(a + bi)^7$ ?

**A2.A.36: Binomial Expansions 6: Apply the binomial theorem to expand a binomial and determine a specific term of a binomial expansion****Answer Section**

1 ANS:

$$24 \sin^2 x$$

REF: 018731siii

2 ANS:

$$3 \sin x$$

REF: 068834siii

3 ANS:

$$270 \cos^2 x$$

REF: 069731siii

4 ANS:

$$6 \cos^2 x$$

REF: 060329siii

5 ANS:

$$24 \sin^2 x \cos^2 y$$

REF: 068735siii

6 ANS:

$$10 \sin^3 x \cos^2 y$$

REF: 019434siii

7 ANS:

$$35a^3b^4$$

REF: 019022siii