

A2.A.36: Binomial Expansions 5: 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 $(\sin x + 2)^4$?
 - 1) $6\sin^4 x$
 - 2) $8\sin^3 x$
 - 3) $24\sin^2 x$
 - 4) $32\sin x$

- 2 The third term in the expansion of $(\sin x - 1)^3$ is
 - 1) $3\sin x$
 - 2) $-3\sin x$
 - 3) $3\sin^2 x$
 - 4) $-3\sin^2 x$

- 3 What is the fourth term in the expansion of $(\cos x + 3)^5$?
 - 1) $90\cos^2 x$
 - 2) $270\cos^2 x$
 - 3) $90\cos^3 x$
 - 4) $270\cos^3 x$

- 4 What is the third term in the expansion of $(\cos x - 1)^4$?
 - 1) $6\cos^2 x$
 - 2) $-6\cos^2 x$
 - 3) $4\cos x$
 - 4) $-4\cos x$

- 5 What is the middle term in the expansion of $(2\sin x + \cos y)^4$?
 - 1) $8\sin^3 x \cos x$
 - 2) $8\sin x \cos^3 y$
 - 3) $12\sin^2 x \cos^2 x$
 - 4) $24\sin^2 x \cos^2 y$

- 6 What is the third term in the expansion of $(\sin x - \cos y)^5$?
 - 1) $10\sin^3 x \cos^2 y$
 - 2) $-10\sin^3 x \cos^2 y$
 - 3) $10\sin^2 x \cos^3 y$
 - 4) $-10\sin^2 x \cos^3 y$

- 7 What is the fifth term in the expansion of $(a + bi)^7$?
 - 1) $35a^3 b^4$
 - 2) $-35a^3 b^4$
 - 3) $21a^2 b^5 i$
 - 4) $-21a^2 b^5 i$

A2.A.36: Binomial Expansions 5: Apply the binomial theorem to expand a binomial and determine a specific term of a binomial expansion**Answer Section**

1	ANS: 3	REF: 018731siii
2	ANS: 1	REF: 068834siii
3	ANS: 2	REF: 069731siii
4	ANS: 1	REF: 060329siii
5	ANS: 4	REF: 068735siii
6	ANS: 1	REF: 019434siii
7	ANS: 1	REF: 019022siii