

Finding Coefficients in Expansions

- (a) Find the coefficient of the x^2 term in the expansion of $(2 + x)^3$
- (b) Find the coefficient of the x^3 term in the expansion of $(1 + 2x)^4$
- (c) Find the coefficient of the x term in the expansion of $(2 + 3x)^5$
- (d) Find the coefficient of the x^2 term in the expansion of $(1 - 3x)^6$

- (a) Find the coefficient of the x term in the expansion of $(4 - 3x)^5$
- (b) Find the coefficient of the x^2 term in the expansion of $(x + 5)^6$
- (c) Find the coefficient of the x^3 term in the expansion of $(2x - 1)^4$
- (d) Find the coefficient of the x^2 term in the expansion of $(\sqrt{2} + x)^5$

- (a) The coefficient of the x^5 term in the expansion of $(a + x)^7$ is 84. Given that a is positive, find its value.
- (b) The coefficient of the x^3 term in the expansion of $(3 - bx)^5$ is -2430 . Find the value of b .

- (a) In the expansion of $(2 + ax)^4$ the coefficient of the x^2 term is three times the coefficient of the x term. Find the value of a .
- (b) In the expansion of $\left(\frac{x}{2} + b\right)^5$ the coefficient of the x^2 term is 72 times the coefficient of the x^4 term. Find the two possible values of b .

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