4.1 Binomial Expansion

Question Paper

Course	Edexcel IAL Maths: Pure 2
Section	4. Sequences & Series
Topic	4.1 Binomial Expansion
Difficulty	Easy

Time allowed: **30**

Score: **/28**

Percentage: **/100**

Question 1

Evaluate

(i) $4!$

(ii) ${}^5C_2$

(iii) ${}^6C_3$

[3 marks]

Question 2

Show that, for all values of k,

$${}^kC_1 = k$$

[2 marks]

Question 3

Expand $(x + 2)^4$.

[3 marks]

Question 4

Find the first three terms, in ascending powers of x, in the expansion of $(3 + 2x)^8$.

[3 marks]

Question 5

Find the coefficient of the x^2 term in the expansion of $(2 - x)^5$.

[3 marks]

Question 6

Expand $(2x - 3)^6$.

[3 marks]

Question 7

In the expansion of $(p + x)^{12}$, the coefficient of the x^5 term is 12 976 128.
Find the value of p.

[3 marks]

Question 8

(a) Find the first three terms in the expansion of $(5 + 2x)^5$.

[3 marks]

Question 8

(b) Use your answer to part (a) to estimate the value of $(5.04)^5$.

[2 marks]

Question 9

In the expansion of $(p + x)^4$, where p is a non-zero constant, the coefficient of the x^2 term is twice the coefficient of the x term. Find the value of p.

[3 marks]