

4.1 Binomial Expansion

Question Paper

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

Time allowed: 50

Score: /38

Percentage: /100

Question 1

Fully expand $(4 - x)^4$.

[3 marks]

Question 2

Fully expand $(2 - \frac{1}{3}x)^4$.

[4 marks]

Question 3

Find the coefficient of the term in x^4 in the expansion of $(3 + 2x)^9$.

[3 marks]

Head to	savemvexam	s.co.uk for	more awesome	resources

Question 4	
(a) Find the first three terms, in ascending powers of x , in the expansion of (5 –	$(2x)^4$.
	[3 marks]
Question 4	
(b) Use your answer to part (a) to estimate $(4.5)^4$.	
	[2 marks]
Question 5	
In the expansion of $(4 - px)^6$, the coefficient of the x^4 term is 19 440. Given that p is a positive integer find the value of p .	
and the or production of the or production of the or production of the original or production of the original or production or p	[3 marks]

Head to savemyexams.	.co.uk for more	awesome resources

Q	u	e	S	ti	O	n	6
ч	•	J	•	٠.	•	••	•

In the expansion of $(3a - 2x)^6$, the coefficient of the x^3 term is equal to the coefficient of the x^4 term. Find the value of a.

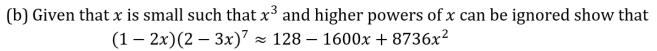
[3 marks]

Question 7

(a) Find the first three terms in the expansion of $(2 - 3x)^7$.

[3 marks]

Question 7



[3 marks]

Question 8

In the expansion of $(p + qx)^8$, the coefficients of the x^2 term and the x^6 terms are equal. Find p in terms of q.

[3 marks]

Question 9

In the expansion of $(1 + x)^n$, the coefficient of the x^3 term is 84. Find the value of n.

[3 marks]

Head to <u>savemyexams.co.uk</u> for more awesome resources

Question 10

In the expansion of $(a + bx)^4$, the coefficient of the x^3 term is 216. In the expansion of $(a + bx)^6$, the coefficient of the x^4 term is 4860. Find the possible values of a and b.

[5 marks]