



Binomial Expansion - Edexcel Past Exam Questions 2

1. (a) Find the first 4 terms of the binomial expansion, in ascending powers of x , of

$$\left(1 + \frac{x}{4}\right)^8,$$

giving each term in its simplest form. (4)

- (b) Use your expansion to estimate the value of $(1.025)^8$, giving your answer to 4 decimal places. (3)

Jan 12 Q3

2. Find the first 3 terms, in ascending powers of x , of the binomial expansion of

$$(2 - 3x)^5,$$

giving each term in its simplest form. (4)

June 12 Q1

3. Find the first 3 terms, in ascending powers of x , in the binomial expansion of

$$(2 - 5x)^6.$$

Give each term in its simplest form. (4)

Jan 13 Q1

4. (a) Use the binomial theorem to find all the terms of the expansion of

$$(2 + 3x)^4.$$

Give each term in its simplest form. (4)

- (b) Write down the expansion of

$$(2 - 3x)^4$$

in ascending powers of x , giving each term in its simplest form. (1)

June 13 Q2



5. Find the first 4 terms, in ascending powers of x , of the binomial expansion of

$$\left(2 - \frac{1}{2}x\right)^8$$

giving each term in its simplest form.

(4)

June 13(R) Q3

6. Find the first 4 terms, in ascending powers of x , of the binomial expansion of

$$\left(1 + \frac{3x}{2}\right)^8$$

giving each term in its simplest form.

(4)

June 14(R) Q1

7. Find the first 3 terms, in ascending powers of x , of the binomial expansion of

$$\left(2 - \frac{x}{4}\right)^{10},$$

giving each term in its simplest form.

(4)

June 15 Q1

8. (a) Find the first 3 terms, in ascending powers of x , of the binomial expansion of

$$(2 - 9x)^4,$$

giving each term in its simplest form.

(4)

$$f(x) = (1 + kx)(2 - 9x)^4, \quad \text{where } k \text{ is a constant.}$$

The expansion, in ascending powers of x , of $f(x)$ up to and including the term in x^2 is

$$A - 232x + Bx^2,$$

where A and B are constants.

- (b) Write down the value of A .

(1)

- (c) Find the value of k .

(2)

- (d) Hence find the value of B .

(2)

June 16 Q5



9. Find the first 4 terms, in ascending powers of x , of the binomial expansion of

$$\left(3 - \frac{1}{3}x\right)^5$$

giving each term in its simplest form.

(4)

June 17 Q1
