Binomial Expansion

Revise this topic →

← Check your work

This booklet features original exam style questions designed by me. They do not feature in past papers but are good practice for your exams.

The content is designed to reflect the style of the AQA Level 2 Certificate in Further Maths.
It may not be suitable for other courses.

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Answer **all** questions in the spaces provided.

1 Expand and simplify fully $(3 + x)^4$ **[4 marks]**

Answer _____

2 Expand and simplify fully $(x - 2)^6$ **[4 marks]**

Answer _____

Video Solutions

3 Expand and simplify fully $(1 + 2x)^5$

[4 marks]

Answer _____

4 Expand and simplify fully $(1 - 3x)^4$

[4 marks]

Answer _____

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Turn over ▶

5   Work out the coefficient of x^3 in the expansion of $(2 + x)^5$ **[2 marks]**

Answer _____

6   Work out the coefficient of x^5 in the expansion of $(2 - x)^6$ **[2 marks]**

Answer _____

7   Work out the coefficient of x^2 in the expansion of $(3x - 2)^4$ **[2 marks]**

Answer _____

Do not write outside the box

8 The coefficient of x^2 in the expansion of $(1 + ax)^7$ is 189.

Work out the two possible values of a.

[3 marks]

Answer _____ and _____

9 The coefficient of x^5 in the expansion of $(b - x)^6$ is -120.

Work out the value of b.

[3 marks]

Answer _____

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Turn over ▶

10 The coefficient of x^3 in the expansion of $(2c + x)^5$ is   360.

Work out the two possible values of c.

[3 marks]

Answer _____ and _____

11 The coefficient of x^3 in the expansion of $(2 + dx)^6$ is   20000.

Work out the value of d.

[3 marks]

Answer _____

Do not write outside the box

12   In the expansion of $(a + bx)^3$

the coefficient of x is -150
the coefficient of x^2 is 60

Work out the values of a and b.   **[5 marks]**

$a =$ _____ $b =$ _____

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