

Expanding Double and Triple Brackets

For Pearson Edexcel GCSE Mathematics (1MA1) • Higher tier

Name _____

Total marks: **24**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

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

.....
(2)

(Total for Question 1 is 2 marks)

2 Expand and simplify $(2x - 3)^2$

.....
(2)

(Total for Question 2 is 2 marks)

3 Expand and simplify $(2x + 3y)^2$

.....
(2)

(Total for Question 3 is 2 marks)

4 Expand and simplify $(x + 6)(x - 3)(x + 2)$

.....
(3)

(Total for Question 4 is 3 marks)

5 Expand and simplify $(x - 1)^3$

.....
(3)

(Total for Question 5 is 3 marks)

6 Show that $(x + 3)(2x - 1)(x - 4)$ can be written in the form $ax^3 + bx^2 + cx + d$ where a , b , c and d are integers.

(3)

(Total for Question 6 is 3 marks)

7 Expand and simplify $(x - 4)(2x + 1)(3x + 2)$

.....
(3)

(Total for Question 7 is 3 marks)

8 n is an integer.
Prove that $(2n + 5)(n - 1) - (n + 2)(2n - 3)$ is always an odd number.

(3)

(Total for Question 8 is 3 marks)

9 $(x + 4)(x - 1)(x + k) \equiv x^3 + ax^2 + 5x + b$
Find the values of k , a and b .

$k = \dots\dots\dots a = \dots\dots\dots b = \dots\dots\dots$
(3)

(Total for Question 9 is 3 marks)
