GCSE (1 – 9)

Expanding Triple Brackets

Instructions

• Use **black** ink or ball-point pen.
• Answer all questions.
• Answer the questions in the spaces provided
– *there may be more space than you need.*
• Diagrams are **NOT** accurately drawn, unless otherwise indicated.
• You must **show all your working out.**

Information

• The marks for each question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

• Read each question carefully before you start to answer it.
• Keep an eye on the time.
• Try to answer every question.
• Check your answers if you have time at the end

1   Expand and Simplify $(x + 2)(x + 4)(x + 1)$

....

2   Expand and Simplify $(x - 3)(x + 5)(x - 2)$

....

3   Expand and Simplify $(x + 2)(x + 1)(x + 5)$

…….......................…….........................

(Total for question 3 is 3 marks)

4   Expand and Simplify $(x + 4)(x + 5)(x - 4)$

…….......................…….........................

(Total for question 4 is 3 marks)

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

....

(Total for question 5 is 3 marks)

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

....

(Total for question 6 is 3 marks)

7 Expand and Simplify $(2x + 1)(x + 2)(x + 3)$

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(Total for question 7 is 3 marks)

8 Expand and Simplify $(2x - 3)(x - 2)(3x - 1)$

…...........................…..........................

(Total for question 8 is 3 marks)

9 Expand and Simplify $(x - 2)(3x + 2)(x + 5)$

…..............................…..........................

(Total for question 9 is 3 marks)

10 Expand and Simplify $(3x + 1)(x + 2)(x - 4)$

…..............................…..........................

(Total for question 10 is 3 marks)

11 Show that $(2x + 3)(5x + 2)(x - 5) = 10x^3 - 31x^2 - 89x - 30$

for all values of x.

12 Show that $(2x - 1)(3x + 2)^2 = 18x^3 + 15x^2 - 4x - 4$

for all values of x.

13 Show that $(3x - 1)(4x + 3)(x - 9) = 12x^3 - 103x^2 - 48x + 27$

for all values of x.

14 Show that $(5x - 4)(3x + 1)(2x - 7) = 30x^3 - 119x^2 + 41x + 28$

for all values of x.