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 \((x - 3)(x + 5)(x - 2)\)

(Total for question 1 is 3 marks)

(Total for question 2 is 3 marks)
3. Expand and Simplify \((x + 2)(x + 1)(x + 5)\)

4. Expand and Simplify \((x + 4)(x + 5)(x - 4)\)
5. Expand and Simplify \((x + 3)(x - 1)^2\)

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

(Total for question 5 is 3 marks)

(Total for question 6 is 3 marks)
7 Expand and Simplify \((2x + 1)(x + 2)(x + 3)\)

8 Expand and Simplify \((2x - 3)(x - 2)(3x - 1)\)
9   Expand and Simplify   \((x - 2)(3x + 2)(x + 5)\)

10  Expand and Simplify   \((3x + 1)(x + 2)(x - 4)\)
11. Show that \((2x + 3)(5x + 2)(x - 5) = 10x^3 - 31x^2 - 89x - 30\)
for all values of \(x\).

(Total for question 11 is 3 marks)

12. Show that \((2x - 1)(3x + 2)^2 = 18x^3 + 15x^2 - 4x - 4\)
for all values of \(x\).

(Total for question 12 is 3 marks)
13  Show that  \((3x - 1)(4x + 3)(x - 9) = 12x^3 - 103x^2 - 48x + 27\)
for all values of \(x\).

(Total for question 13 is 3 marks)

14  Show that  \((5x - 4)(3x + 1)(2x - 7) = 30x^3 - 119x^2 + 41x + 28\)
for all values of \(x\).

(Total for question 14 is 3 marks)