2.13 Expanding Double Brackets: 1-hour Pack

Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Expand and simplify 3(x + 4) + 6(x - 4).

(3)

2 Expand and simplify (b + 8)(b - 8).

(2)

3 Expand and simplify 4(b + 1) - 2(b - 4).

(3)

4 Expand and simplify 3(n + 4) + 5(n - 7).

(3)

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5 Expand and simplify $2(b + 6) - 6(b - 3)$.

(3)

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6 Show that $t^2 + 10t + 16$ can be written as $(t + 2)(t + 8)$.

(3)

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7 Expand and simplify $(p - 3)^2$.

(3)

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8 Expand and simplify: $(2x + 3)(2x - 1)$.

(3)

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9 Show that $t^2 + 9t + 8$ can be written as $(t + 8)(t + 1)$.

(3)

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10 Show that $t^2 + 8t + 16$ can be written as $(t + 4)(t + 4)$.

(3)

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11 Show that $n^2 + 10n + 21$ can be written as $(n + 7)(n + 3)$.

(3)

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12 Show that $2(a + 5) + 2(a + 4) = 4a + 18$.

(3)

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13 Show that $6(x + 6) + 2(x + 3) = 8x + 42$.

(3)

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14 Expand and simplify $2(a + 8) - 6(a - 5)$.

(3)

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15 Expand and simplify $(p + 7)^2$.

(3)

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16 Expand and simplify: $(x + 7)(x - 7)$.

(2)

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Mark scheme · 2.13 Expanding Double Brackets: 1-hour Pack

Question 1

first bracket expanded correctly	M1
second bracket expanded correctly (watch the signs)	M1
9x - 12 cao	A1

Answer: **9x - 12**

Question 2

all products attempted, at least three correct	M1
b^2 - 64 cao	A1

Answer: **b^2 - 64**

Question 3

first bracket expanded correctly	M1
second bracket expanded correctly (watch the signs)	M1
2b + 12 cao	A1

Answer: **2b + 12**

Question 4

first bracket expanded correctly	M1
second bracket expanded correctly (watch the signs)	M1
8n - 23 cao	A1

Answer: **8n - 23**

Question 5

first bracket expanded correctly	M1
second bracket expanded correctly (watch the signs)	M1
-4b + 30 cao	A1

Answer: **-4b + 30**

Question 6

expands (t + 2)(t + 8) with at least three terms correct	M1
t^2 + 2t + 8t + 16 shown	M1
t^2 + 10t + 16 shown (with 2t + 8t = 10t)	A1

Answer: **t^2 + 10t + 16 (shown)**

Question 7

at least three of the four products correct	M1
all four products correct	M1
p^2 - 6p + 9 cao	A1

Answer: **p^2 - 6p + 9**

Question 8

correct multiplication of first terms and outer/inner terms shown	M1
all four terms or combined equivalent	M1
$4x^2$ + 4x - 3 cao	A1

Answer: **$4x^2$ + 4x - 3**

Question 9

expands (t + 8)(t + 1) with at least three terms correct	M1
t^2 + 8t + t + 8 shown	M1
t^2 + 9t + 8 shown (with 8t + t = 9t)	A1

Answer: **t^2 + 9t + 8 (shown)**

Question 10

expands (t + 4)(t + 4) with at least three terms correct	M1
t^2 + 4t + 4t + 16 shown	M1
t^2 + 8t + 16 shown (with 4t + 4t = 8t)	A1

Answer: **t^2 + 8t + 16 (shown)**

Question 11

expands (n + 7)(n + 3) with at least three terms correct	M1
n^2 + 7n + 3n + 21 shown	M1
n^2 + 10n + 21 shown (with 7n + 3n = 10n)	A1

Answer: **n^2 + 10n + 21 (shown)**

Question 12

2(a + 5) = 2a + 10	M1
2(a + 4) = 2a + 8	M1
collects like terms to give 4a + 18	A1

Answer: **4a + 18 (shown)**

Question 13

6(x + 6) = 6x + 36	M1
2(x + 3) = 2x + 6	M1
collects like terms to give 8x + 42	A1

Answer: **8x + 42 (shown)**

Question 14

first bracket expanded correctly	M1
second bracket expanded correctly (watch the signs)	M1
-4a + 46 cao	A1

Answer: **-4a + 46**

Question 15

at least three of the four products correct	M1
all four products correct	M1
p^2 + 14p + 49 cao	A1

Answer: **p^2 + 14p + 49**

Question 16

three or four correct terms before collecting	M1
x^2 - 49 cao	A1

Answer: **x^2 - 49**

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