2.13 Expanding Double Brackets: 30-minute Pack

Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Expand and simplify then collect like terms: (x + 1)(x - 2) + (x - 3)(x + 4).

(3)

---

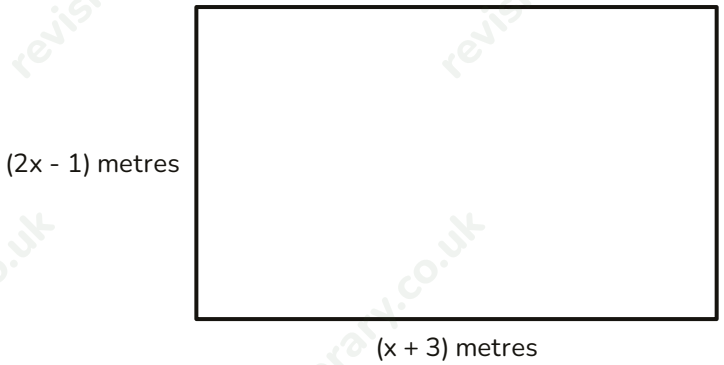
2 Expand and simplify fully: (x + 2)(x - 3) - (x - 1)(x + 5).

(3)

© Revision Library | revisionlibrary.co.uk

3 A rectangle has length (x + 3) metres and width (2x - 1) metres. Expand and simplify an expression for its area.

Diagram NOT accurately drawn



(4)

---

4 Find the expanded form of (ax + 2)(2x - b) and give the coefficient of x in terms of a and b.

(4)

---

5 Expand and simplify: (x + 7)(x - 2).

(3)

© Revision Library | revisionlibrary.co.uk

6 Show that $3(x + 1) + 2(x + 4) = 5x + 11$.

(3)

---

7 Expand and simplify: $(3x - 2)(x - 6)$.

(2)

---

8 A student expands $(x + 5)(x + k)$ and obtains $x^2 + (k + 5)x + 5k$. The student claims the coefficient of x is 13. Find k if the claim is correct, then state the constant term.

(3)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 2.13 Expanding Double Brackets: 30-minute Pack

Question 1

each pair of brackets expanded correctly (may be one M1)	M1
all like terms collected	M1
$2x^2$ - 14 cao	A1

Answer: **$2x^2$ - 14**

Question 2

each pair expanded correctly	M1
subtraction applied and like terms combined	M1
-5x - 1 cao	A1

Answer: **-5x - 1**

Question 3

apply multiplication to find each term	M1
all terms written out	M1
like terms combined	M1
$2x^2$ + 5x - 3 cao	A1

Answer: **$2x^2$ + 5x - 3**

Question 4

expand to get terms ax*2x, ax*(-b), 2*2x, 2*(-b)	M1
write expanded polynomial with each term	M1
collect like terms for x term	M1
$2ax^2$ + (4 - ab)x - 2b cao for the coefficient part, coefficient is 4 - ab	A1

Answer: **$2ax^2$ + (4 - ab)x - 2b**

Question 5

two products found correctly, e.g. x*x and x*(-2) or 7*x and 7*(-2) or equivalent	M1
all four terms written before combining or a correct partial combination	M1
x^2 + 5x - 14 cao	A1

Answer: **x^2 + 5x - 14**

Question 6

3(x + 1) = 3x + 3	M1
2(x + 4) = 2x + 8	M1
collects like terms to give 5x + 11	A1

Answer: **5x + 11 (shown)**

Question 7

three or four correct terms before collecting	M1
$3x^2$ - 20x + 12 cao	A1

Answer: **$3x^2$ - 20x + 12**

Question 8

forms k + 5 = 13	M1
k = 8 cao	A1
constant term = 40 (ft their k)	B1

Answer: **k = 8, constant term = 40**

© Revision Library | revisionlibrary.co.uk