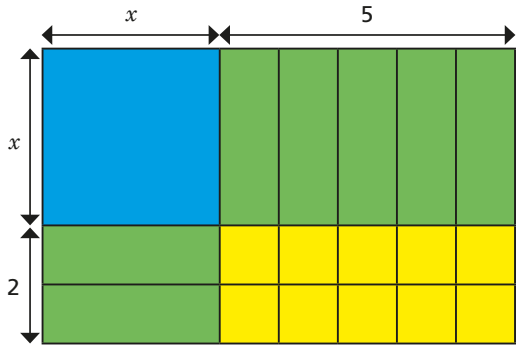
Expand a pair of binomials

H

1 Use a grid method of multiplication to work out the calculations.

a) 41 × 23 **b)** 56 × 78

2 Teddy is using algebra tiles to expand $(x + 5)(x + 2)$.



Use the algebra tiles to complete the expansion.

$(x + 5)(x + 2) \equiv$ _____

3 Use algebra tiles to expand and simplify the expressions.

a) $(x + 2)(x + 3)$ **c)** $(2x + 3)(x + 1)$

b) $(x + 1)(x + 4)$ **d)** $(2 + x)(x + 3)$

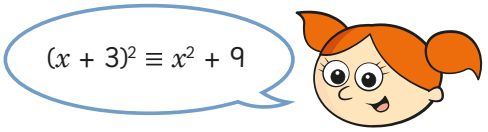
4 Expand and simplify the expressions.

a) $(x + 1)(x + 3)$

b) $(k + 1)(k + 8)$

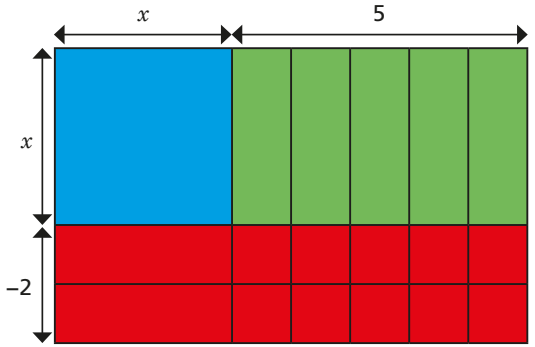
c) $(2b + 4)(b + 6)$

5



Show that Alex is incorrect.

6 Teddy uses algebra tiles to expand $(x + 5)(x - 2)$.



Use algebra tiles to complete the expansions.

a) $(x + 5)(x - 2) \equiv$ _____

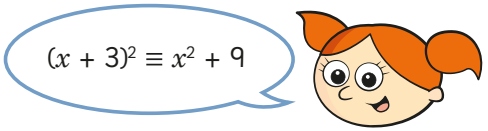
b) $(x - 5)(x + 2) \equiv$ _____

7 Expand and simplify the expressions.

a) $(p + 6)(p - 3)$ **c)** $(u - 4)(u - 2)$

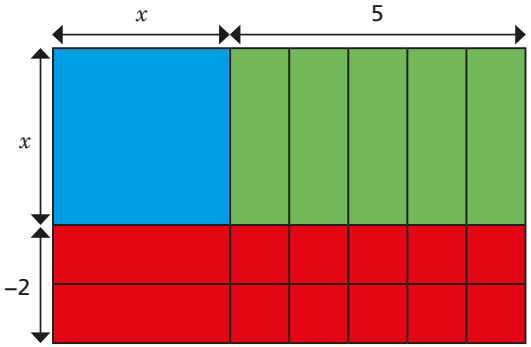
b) $(t - 7)(t + 4)$ **d)** $(2x + 5)(x - 2)$

5



Show that Alex is incorrect.

6 Teddy uses algebra tiles to expand $(x + 5)(x - 2)$.



Use algebra tiles to complete the expansions.

a) $(x + 5)(x - 2) \equiv$ _____

b) $(x - 5)(x + 2) \equiv$ _____

7 Expand and simplify the expressions.

a) $(p + 6)(p - 3)$

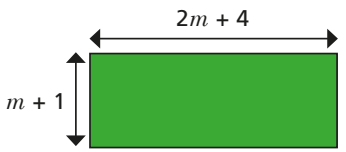
b) $(t - 7)(t + 4)$

c) $(u - 4)(u - 2)$

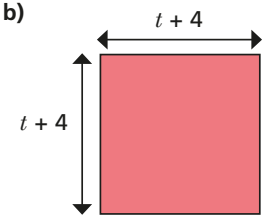
d) $(2x + 5)(x - 2)$

8 Write expressions for the areas of the shapes.

a)



b)



9 Expand each expression.

$(x + 5)(x - 5)$	$(x - 3)(x + 3)$
$(2x + 4)(2x - 4)$	$(5 + a)(5 - a)$

Discuss with a partner what you notice about the answers.

10 Expand and simplify the expressions.

a) $(x + a)(x + a)$

b) $(x + a)(x + b)$

c) $(x + a)(x - b)$

d) $(x + a)(x - a)$