1 The bar model shows $b + 5$

b	5

a) Discuss why this bar model shows $2(b + 5)$

b	5
b	5
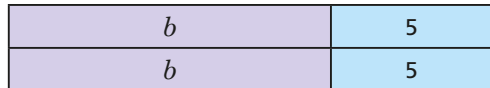
b) Draw a bar model to represent $3(b + 5)$

2 Use the bar models to expand the brackets.

a) $2(x + 3) \equiv$ _____ **b)** $5(p + 7) \equiv$ _____

x	3
x	3

p	7
p	7
p	7
p	7
p	7
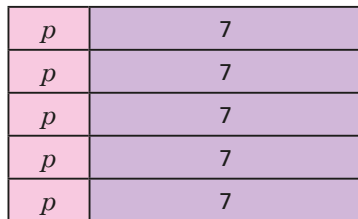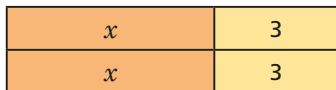
3 Draw bar models to help you with the expansions.

a) $3(t + 2) \equiv$ _____

b) $4(5 + k) \equiv$ _____

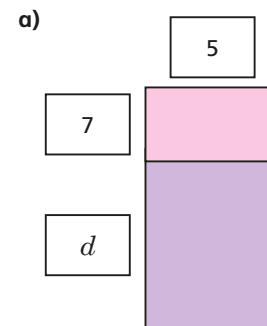**c)** $2(3p + 1) \equiv$ _____

4 Amir has expanded this bracket.

$$2(k + 5) \equiv 2 \times k + 2 \times 5$$
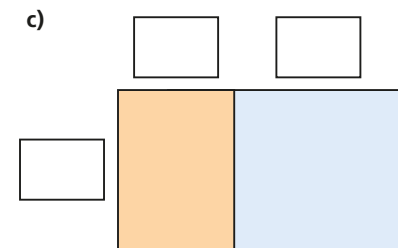$$\equiv 2k + 10$$

Expand the brackets.

a) $7(y + 4) \equiv$ _____ **e)** $9(5t - 1) \equiv$ _____

b) $5(p - 2) \equiv$ _____ **f)** $3(a + b) \equiv$ _____

c) $6(8 + g) \equiv$ _____ **g)** $4(2m + k) \equiv$ _____

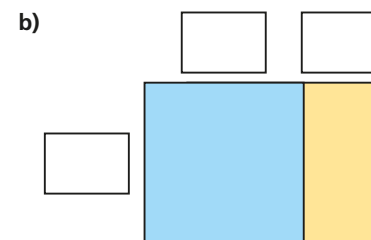**d)** $3(4e + 3) \equiv$ _____ **h)** $7(3p - 2q) \equiv$ _____

5 Use the rectangles to describe each area in an expanded form.

a)

$(7 + d) \times 5 \equiv$ _____

c)

$2k(k + 2t) \equiv$ _____

b)

$n(n + 7) \equiv$ _____

d)

$ak(k + a) \equiv$ _____

Expand the brackets.

a) $7(y + 4) \equiv$ _____

e) $9(5t - 1) \equiv$ _____

b) $5(p - 2) \equiv$ _____

f) $3(a + b) \equiv$ _____

c) $6(8 + g) \equiv$ _____

g) $4(2m + k) \equiv$ _____

d) $3(4e + 3) \equiv$ _____

h) $7(3p - 2q) \equiv$ _____

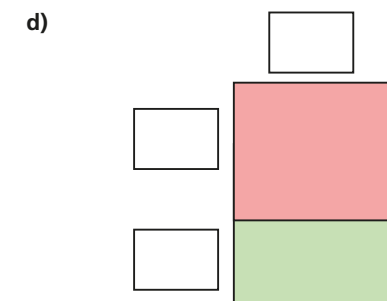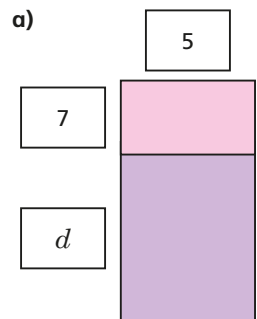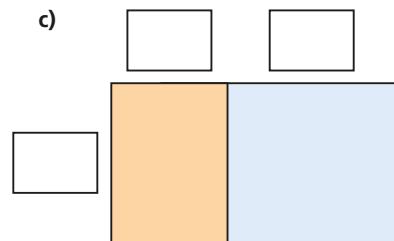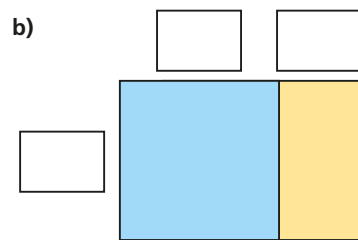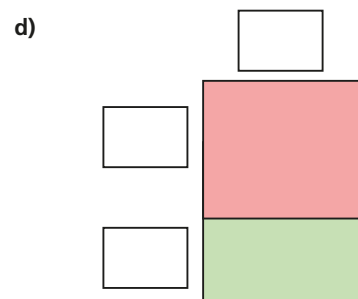**5** Use the rectangles to describe each area in an expanded form.

a)

$(7 + d) \times 5 \equiv$ _____

c)

$2k(k + 2t) \equiv$ _____

b)

$n(n + 7) \equiv$ _____

d)

$ak(k + a) \equiv$ _____

6 Eva expands $4(2p - 3)$.

Here is her working out.

$$4(2p - 3) = 8p + 1$$

What mistake has Eva made?

What is the correct answer?

7 Fill in the boxes to make the statements correct.

a) $2(\boxed{} + 5) \equiv 8j + 10$

b) $\boxed{}(4k + 7) \equiv 20k + \boxed{}$

c) $9(2m - \boxed{}) \equiv \boxed{} - 81$

8 Expand the expressions.

a) $-3(f + 7) \equiv$ _____

c) $-5(-4 + 2k) \equiv$ _____

b) $-4(w - 6) \equiv$ _____

d) $-3n(-n - 8) \equiv$ _____

9 Kim is 5 years older than Scott.

Kim's mum is 3 times Kim's age.

Scott's dad is 3 times Scott's age.

How much older is Kim's mum than Scott's dad?