

Expanding Brackets

How to ...

(a) Expand

$$3(2 + t)$$

$$3 \times 2 = 6$$

$$3 \times t = 3t$$

$$\underline{6 + 3t}$$

Be careful
when there are
negatives in
the expression

(b) Expand

$$3x(2x + 5)$$

$$3x \times 2x = 6x^2$$

$$3x \times 5 = 15x$$

$$6x^2 + 15x$$

(c) Expand

$$(m + 3)(m + 10)$$

$$(m + 3)(m + 10)$$

a common mistake
is to do $3 + 10$
instead of 3×10

$$m^2 + 10m + 3m + 30$$

this is expanded

$$\underline{m^2 + 13m + 30}$$

← this is simplified.
(5)

Now have a go yourself ...

SORTED IT

- a)** $2(p + 3)$ **b)** $3(p - 3)$ **c)** $4(p + q)$
d) $3(5 - p)$ **e)** $2(2x + y - 3)$ **f)** $5(3c + 1)$
g) $4(x^2 + 1)$ **h)** $3(x^2 - 2)$ **i)** $3(n^2 - 2n + 1)$

NAILED IT

- a)** $p(p + 2)$ **b)** $q(q - 3)$ **c)** $2p(p + 5)$
d) $x(4 - x)$ **e)** $x(y + z)$ **f)** $d(3d - 4)$
g) $-2(x + 3)$ **h)** $-3(2p + 2)$ **i)** $-2d(d - 4)$

MASTERED IT

- a)** $(x + 2)(x + 3)$ **b)** $(x + 3)(x + 4)$
c) $(x + 1)(x + 2)$ **d)** $(y + 2)(y - 5)$
e) $(x - 2)(x + 3)$ **f)** $(y + 1)(y - 2)$
g) $(x - 2)(x - 3)$ **h)** $(x - 4)(x - 5)$
i) $(x + 2)^2$ **j)** $(y + 1)(2y + 1)$
k) $(x - 1)(3x + 1)$ **l)** $(2y + 3)(y + 4)$
m) $(3p + 2)(2p + 5)$ **n)** $(x - y)(x - 2y)$

Exam Questions

Expand and Simplify

(i) $2(x - 4) + 3(x + 2)$

(ii) $x(x + 3)$

(iii) $y(2y - 3)$

(iv) $(x + 3)(x + 4)$

(v) $(x - 3)(x + 9)$

(vi) $(x - 3)(x - 7)$

Ready to be marked ?

Checklist

☐

Answer checked

☐

Working out shown



Keywords

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Things to remember ...

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What went well ...

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Teacher comment ..