

## Expanding Single Brackets

Expand

(a)  $4(x - 3)$       (b)  $2(3 + 4y)$

(c)  $x(x + 4)$       (d)  $x(7 - x)$

(e)  $2x(x + 9)$       (f)  $x(y + 3x)$

(g)  $-2(4 + x)$       (h)  $-(x - 6)$

(i)  $-3x(6 - x)$       (j)  $-y(x + y)$

(k)  $x^2(3x + y)$       (l)  $2y^2(y - x)$

(a)  $4x - 12$       (b)  $6 + 8y$

(c)  $x^2 + 4x$       (d)  $7x - x^2$

(e)  $2x^2 + 18x$       (f)  $xy + 3x^2$

(g)  $-8 - 2x$       (h)  $-x + 6$

(i)  $-18x + 3x^2$       (j)  $-xy - y^2$

(k)  $3x^3 + x^2y$       (l)  $2y^3 - 2xy^2$

Expand and simplify

(a)  $2(x + 4) + 5(x + 7)$

(b)  $3(a + 2) + 4(a - 1)$

(c)  $4(p - 5) + 6(p - 1)$

(d)  $2(x + 8) - 3(x + 2)$

(e)  $5(x - 2) - 2(x - 9)$

(f)  $3(2x + 1) - 4(x + 5)$

(g)  $2(3x + 1) - (2x - 3)$

(h)  $2(p - 4) + 3(2p - 1)$

(a)  $7x + 43$

(b)  $7a + 2$

(c)  $10p - 26$

(d)  $-x + 10$

(e)  $3x + 8$

(f)  $2x - 17$

(g)  $4x + 5$

(h)  $8p - 11$

Expand and simplify

(a)  $x(x^2 - 2y) - 3x^2(x + 2y)$

(b)  $a(a + 2b + 3c) + 3c(a - 2b + 3c)$

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

(d)  $6 + 2(x + 7)$

(e)  $6 + 2(3 - x)$

(f)  $6 - (2x + 3)$

(a)  $-2x^3 - 2xy - 6x^2y$

(b)  $a^2 + 2ab + 6ac - 6bc + 9c^2$

(c)  $0$

(d)  $2x + 20$

(e)  $12 - 2x$

(f)  $3 - 2x$

(a) A rectangle has a width  $x$  cm and a length  $x + 5$  cm. Write a simplified expression for the area of the rectangle.

(b) A triangle has a base of  $4x$  cm and a height of  $(3x - 5)$  cm. Find a simplified expression for the area of the triangle.

(a)  $x^2 + 5x$

(b)  $6x^2 - 10x$