

## Expanding single brackets

### Starter

1. **(Review of last lesson)** The total surface area  $A$  of a cone is given by  $A = \pi r(r + l)$ . Find  $A$  when  $r = 7$  and  $l = 11$ . Give your answer in terms of  $\pi$ .

**Working:**  $A = \pi r(r + l) = \pi \times 7(7 + 11) = 7\pi \times 18 = 126\pi$

2. **(Review of previous material)**

Expand these brackets: (a)  $7(x + 6)$  (b)  $x(9x - 4)$

**Working:** (a)  $7(x + 6) = 7x + 42$

(b)  $x(9x - 4) = 9x^2 - 4x$

### E.g. 1 Expand these brackets

(a)  $8(3y - 7)$  (b)  $6x(2x - 7)$  (c)  $-5y(8 - 9y)$   
(d)  $-(3x - 8)$  (e)  $ab(4a - 7b)$  (d)  $3x^2y(x^4 + 7y)$

**Working:** (a)  $8(3y - 7) = 24y - 56$

(b)  $6x(2x + 7) = 12x^2 + 42x$

(c)  $-5y(8 - 9y) = -40y + 45y^2$

(d)  $-(3x - 9) = -3x + 27$

(e)  $ab(4a - 7b) = 4a^2b - 7ab^2$

(d)  $3x^2y(x^4 + 7y) = 3x^6y + 21x^2y^2$

**Video:** [Expanding brackets](#)

[Solutions to Starter and E.g.s](#)

### Exercise

9-1 class textbook: p101 M4.3 Qu 19-42  
A\*-G class textbook: p92 M4.3 Qu 19-42  
9-1 homework book: p34 M4.3 Qu 13-37  
A\*-G homework book: p26 M4.3 Qu 13-36