

Mixed Expanding Brackets

Expand and simplify, where possible:

- (a) $6(x + 5) - 4(3 + x)$
- (b) $(2y + 5)(4 - y)$
- (c) $a(b + 2a) - 2(ab + 3)$
- (d) $x(3x - 2) - 2x(1 - x)$
- (e) $(9 - 2b)(b + a)$

- (a) $2x + 18$
- (b) $20 + 3y - 2y^2$
- (c) $2a^2 - ab - 6$
- (d) $5x^2 - 4x$
- (e) $9b + 9a - 2b^2 - 2ab$

Expand and simplify, where possible:

- (a) $x + 2 + (x + 7)(x + 4)$
- (b) $20 - 3y(y + 6)$
- (c) $a(a + b) + 5a - 7ab$
- (d) $(2c - 5)(3c - 1) + c^2$
- (e) $x^2 - 16 + (x + 4)^2$

- (a) $x^2 + 12x + 30$
- (b) $20 - 3y^2 - 18y$
- (c) $a^2 - 6ab + 5a$
- (d) $7c^2 - 17c + 5$
- (e) $2x^2 + 8x$

Expand and simplify, where possible:

- (a) $4w(5 - 2w) - 3(5 - 2w) - 12$
- (b) $(5 - 2w)(4w - 3) - 12$
- (c) $(x - 5)(x - 2) + 5(x - 2)$
- (d) $(5c - d)(3d - 2c) - 2(c + d)$
- (e) $6(4 - x) - (x + 1)(x - 1)$

- (a) $26w - 8w^2 - 27$
- (b) $26w - 8w^2 - 27$
- (c) $x^2 - 2x$
- (d) $7cd - 3d^2 - 10c^2 - 2c - 2d$
- (e) $25 - 6x - x^2$

Expand and simplify, where possible:

- (a) $xy(5 + x) + (y + x)(2y - x) + 3xy$
- (b) $2a^2 - (a + 2b)(3b - 1) + 4a(b - 2a)$
- (c) $(5y - 1)(y + 3) - (2y + 3)(y + 7)$

- (a) $5x^2y + x^2y + 2y^2 + 2x^2y - xy - x^2$
 $= x^2y + 2y^2 - x^2 + 9x^2y + 3x^2y$
- (b) $2a^2 - 3ab - 6b^2 + a + 2b + 4ab - 8a^2$
 $= ab + a + 2b - 6b^2 - 6a^2$
- (c) $5y^2 - y + 15y - 3 - 2y^2 - 3y - 14y - 21$
 $= 3y^2 - 3y - 24$

Come up with your own 'expand and simplify' question where the answer is $5x + 18$ and the question contains:

- (a) Two sets of single brackets
- (b) One set of double brackets
- (c) One set of double brackets and one set of single brackets

- (a) $3(x+5) + 2(x+2) - 1$ EXAMPLE
- (b) $(x+3)(x+6) - x^2 - 4x$
- (c) $(x+4)(x+5) - x(x+4) - 2$