

Factorising

Starter

1. (Review of a previous lesson)

Expanding brackets: (a) $5(4x - 3)$ (b) $8x(7x + 9)$ (c) $-7x^2(6 - 4x)$

Working: (a) $20x - 15$ (b) $56x^2 + 72x$ (c) $28x^3 - 42x^2$

2. Simplify: (a) $a \times a$ (b) $p \times p^2$

Working: (a) $a \times a = a^2$

(b) $p \times p^2 = p \times p \times p = p^3$

E.g. 1 Factorise: (a) $12x + 16$ (b) $x^2 - 7x$ (c) $5x^3 + x^2$

Working: (a) $12x + 16 = 4(3x + 4)$

(b) $x^2 - 7x = x(x - 7)$

(c) $5x^3 + x^2 = x^2(5x + 1)$

E.g. 2 Factorise: (a) $12xy - 3yz$ (b) $6x^2y - 5xy$ (c) $8p - 16pqr$

Working: (a) $12xy - 3yz = 3y(4x - z)$

(b) $6x^2y - 5xy = xy(6x - 5)$

(c) $8p - 16pqr = 8p(1 - 2qr)$

E.g. 3 Factorise: (a) $4x - 8y + 6z$ (b) $ab^2 - a^3bc + a^2b^3c^4$

Working: (a) $4x - 8y + 6z = 2(2x - 4y + 3z)$

(b) $ab^2 - a^3bc + a^2b^3c^4 = ab(b - a^2c + ab^2c^4)$

Video: [Factorising](#)

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

Exercise

p136 Ex 8.3 Qu 1-10

[Textbook answers \(only available during a lockdown\)](#)