

10.9 Factorisation 1

1. Copy and complete the following:

- (a) $5a + 10b = 5(\quad + \quad)$ (b) $6p - 15q = ?(2p - ?)$
(c) $16x - 32y = ?(x - ?y)$ (d) $14xy - 7yz = 7y(\quad - z)$
(e) $20x^2 - 16x = 4x(\quad - 4)$ (f) $2a + 4ab = 2a(\quad + ?)$
(g) $2x^2 + 2xz = 2x(\quad + ?)$ (h) $9mn - 27m^2r = ?(n - ?)$
(i) $8pq - 12q^2 = ?(2p - ?)$ (j) $2ax^2 - 4a^2x = ?(\quad - 2a)$
(k) $9x^2y^2 - 3x = 3x(\quad - ?)$ (l) $14m^2r - 7r = ?(2m^2 - ?)$
(m) $12pq^2 + 16p^2q^2 = ?(\quad + 4p)$

2. Factorise the following:

- (a) $10a - 15b$ (b) $50py - 120p$ (c) $24abc - 8ab$
(d) $6abc + 12bcd$ (e) $16m^2 + 12n^2$ (f) $p^2y + p^2y^2$
(g) $18s^2t - 12st^2$ (h) $10a + 15a^2$ (i) $c - c^2$
(j) $2a^2b^2 - 8a^2b$ (k) $m^2n - mnl$ (l) $6xy - 3y + 9x$
(m) $pqr + p^2 + pr$ (n) $abc + a^2b + bc$ (o) $8abc + 6ab^2c + 4abc^2$
(p) $5s^2t - 3st - 4st^2$

3. Copy and complete the following:

- (a) $m(x - y) + n(x - y) = (x - y)(\quad)$
(b) $k(a + b) + l(a + b) = (a + b)(\quad)$
(c) $a(2x + y) - b(2x + y) = (2x + y)(\quad)$
(d) $3x(c + d) - 2y(c + d) = (c + d)(\quad)$
(e) $(a + b)y + (a + b)x = (a + b)(\quad)$
(f) $(x - y)k + (x - y)l = (x - y)(\quad)$
(g) $(2x + 3y)a - (3y + 2x)b = (2x + 3y)(\quad)$
(h) $3b(p + q) - ab(q + p) = (p + q)(\quad) = b(p + q)(\quad)$
(i) $10a(c + d) - 5a^2(d + c) = (c + d)(\quad) = 5a(c + d)(\quad)$
(j) $4(m + n) - 8z(n + m) = (m + n)(\quad) = 4(m + n)(\quad)$

4. (a) Expand $3(x + 2)$
(b) Factorise $6a - 10$
(c) Factorise fully $6a^2b + 9ab^2$

(AQA)