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Class: 8

Subject: Mathematics

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Topic: Expansion and Factorisation of algebraic expressions

Q1: Expand each of the following:

- (a) $4(5h - 7k)$
- (b) $-8(4p - 9q)$
- (c) $9a(-4a + 7b)$
- (d) $-7y(-3x - 4y)$
- (e) $11(5x - 7) + 9(2 - 3x)$
- (f) $5x(-2x - 3y) + (-x + 3y)$
- (g) $(x + 11)(x - 7)$
- (h) $(x^2 + 3)(2x - 4)$
- (i) $(x + 3)(x^2 - 3x + 9)$
- (j) $(3 - a)(9 + 3a + a^2)$

Q2: Expand each of the following:

- (a) $(5y + 4z)^2$
- (b) $(6x - 7)^2$
- (c) $(8x + \frac{y}{3})^2$
- (d) $(9m - 3n)^2$
- (e) $(3x^2 + 8)^2$

Q3: Evaluate the following by using an algebraic identity:

- (a) $(903)^2$
- (b) $(97)^2$
- (c) 1208×1192
- (d) $(988)^2$
- (e) $(704)^2$
- (f) 110×90

Q4: Factorise each of the following:

- (a) $24x + 16$
- (b) $2a^2b^3c - 8ab^2c^3$
- (c) $6a^2 + 8a^3 - 10a^5$
- (d) $2ax - 4ay + 3bx - 6by$
- (e) $3xy + 6y - 5x - 10$
- (f) $x^2z - 4y - x^2y + 4z$

