

Must Know Questions To Ace Expansion & Factorisation

1.	Expand and simplify each of the following expressions: a) $3(-5 - 2x^2 + 3x) - (-3x^2 - 4 + 2x)$ b) $-3(x^2 - 3 + 4x) + 4(4x - 3x^2 - 6)$
2.	Expand and simplify each of the following expressions: a) $(3 - 4a)(-5a + 6)$ b) $-4(2x + 5) + 2(2 - x)(5 + 3x)$
3.	Expand and simplify each of the following expressions: a) $3x(2x - 3) + (x - 2)^2$ b) $(3x + 2b)^2 - (3a + 2b)(3a - 2b)$
4.	Given that $x^2 + y^2 = 53$ and $xy = 14$, find the value of $(2x + 2y)^2$.
5.	Factorise each of the following: a) $30a^2b^2 - 18a^3b + 6ab$ b) $3x^2 + 11x - 20$
6.	Factorise each of the following: a) $9x^2 + 6xy + y^2$ b) $27a^2c - 192b^2c$
7.	Use algebraic rules to evaluate each of the following. a) $75^2 - 750 + 25$ b) $93^2 - 49$

Answer Key:

1. a) $-3x^2 + 7x - 11$

b) $-15x^2 + 4x - 15$

2. a) $20a^2 - 39a + 18$

b) $-6x^2 - 6x$

3. a) $7x^2 - 13x + 4$

b) $8b^2 + 12ab$

4. $(2x + 2y)^2 = 324$

5. a) $6ab (5ab - 3a^2 + 1)$

b) $(3x - 4)(x + 5)$

6. a) $(3x + y)^2$

b) $3c (3a - 8b)(3a + 8b)$

7. a) 4900

b) 8600

