



# MATHS

**BOOKS - NAVNEET PUBLICATION**

## **ALGEBRAIC FORMULAE-EXPANSION OF SQUARES**

### **Question Bank**

**1. Expand :**

$$(5a + 6b)^2$$



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2. Expand :

$$\left(\frac{a}{2} + \frac{b}{3}\right)^2$$



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3. Expand :

$$(2p - 3q)^2$$



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4. Expand :

$$\left(x - \frac{2}{x}\right)^2$$



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5. Expand :

$$(ax + by)^2$$



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6. Expand :

$$(7m - 4)^2$$



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7. Expand :

$$\left(x - \frac{1}{2}\right)^2$$



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8. Expand :

$$\left(a - \frac{1}{a}\right)^2$$



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9. Which of the options given below is the square of the binomial  $(8-1/x)$ ?

A.  $64 - \frac{1}{x^2}$

B.  $64 + \frac{1}{x^2}$

C.  $64 - \frac{16}{x} + \frac{1}{x^2}$

$$\text{D. } 64 + \frac{16}{x} + \frac{1}{x^2}$$

**Answer: C**



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**10.** Of which of the binomials given below is

$m^2n^2 + 14mnpq + 49p^2q^2$  the expansion?

A.  $(m + n)(p + q)$

B.  $(mn - pq)^2$

C.  $(7mn + pq)^2$

$$D. (mn + 7pq)^2$$

**Answer: D**



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**11. Use expansion formulae to find the values.**

$$(997)^2$$



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**12.** Use expansion formulae to find the values.

$$(102)^2$$



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**13.** Use expansion formulae to find the values.

$$(97)^2$$



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**14.** Use expansion formulae to find the values.

$$(1005)^2$$



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**15.** Use the formula to multiply the following :

$$(x+y)(x-y)$$



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**16.** Use the formula to multiply the following :

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



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**17.** Use the formula to multiply the following :

$$(a+6)(a-6)$$



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**18.** Use the formula to multiply the following :

$$\left(\frac{x}{5} + 6\right)\left(\frac{x}{5} - 6\right)$$



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**19.** Use the formula to find the values :

$$502 \times 498$$



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**20.** Use the formula to find the values :

$$97 \times 103$$



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**21.** Use the formula to find the values :

$$54 \times 46$$



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**22.** Use the formula to find the values :

$$98 \times 102$$



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**23.** Factorise the following expressions and write them in the product form:

$$201a^3b^3$$



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**24.** Factorise the following expressions and write them in the product form:

$$91xyt^2$$



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**25.** Factorise the following expressions and write them in the product form:

$$24a^2b^2$$



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**26.** Factorise the following expressions and write them in the product form:

$$tr^2s^3$$



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**27.** Factorise the following expressions :

$$p^2 - q^2$$



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**28.** Factorise the following expressions :

$$4x^2 - 25y^2$$



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**29.** Factorise the following expressions :

$$y^2 - 4$$



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**30.** Factorise the following expressions :

$$p^2 - \frac{1}{25}$$



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**31.** Factorise the following expressions :

$$9x^2 - \frac{1}{16}y^2$$



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**32.** Factorise the following expressions :

$$x^2 - \frac{1}{x^2}$$



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**33.** Factorise the following expressions :

$$a^2b - ab$$



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**34.** Factorise the following expressions :

$$4x^3y - 6x^2$$



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**35.** Factorise the following expressions :

$$\frac{1}{2}y^2 - 8z^2$$



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**36.** Factorise the following expressions :

$$2x^2 - 8y^2$$



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**37.** What is the common factor in the given expression?

$$mn+np$$



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**38.** What is the common factor in the given expression?

$12xy$  and  $15xz$



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**39.** What is the common factor in the given expression?

$a^2b^3$  and  $a^3b^2$



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40. Say the product form of  $3xy$



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41. Say the product form of  $a^2bc^2$



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42. Say the product form of  $xy^2z$



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**43.** Of which are the following numbers perfect squares?

36,100,25,225,144.



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