



REET 2025

LEVEL-2



वंदन बैच

MATHS

Algebra

(बीजगणित)

Part -4



LIVE

03-02-2025 05:00 PM

$$(a+b)^2 = a^2 + b^2 + 2ab$$

$$+ (a-b)^2 = a^2 + b^2 - 2ab$$

$$(a+b)^2 + (a-b)^2 = 2a^2 + 2b^2$$

$$(a+b)^2 + (a-b)^2 = 2(a^2 + b^2)$$

$$\frac{(a+b)^2 + (a-b)^2}{(a^2 + b^2)} = 2$$

$$\frac{(110)^2 + (148)^2}{79^2 + 31^2} = ?$$

$$12100 + 2304$$

$$6241 + 961$$

$$\frac{14404}{7202} = 2$$

$$\frac{(79+31)^2 + (79-31)^2}{79^2 + 31^2}$$

$$2$$

$$\frac{(2.70 \times 2.70) + (4.30 \times 4.30) + 2.70 \times 8.60}{(2.70 + 4.30)}$$

$$\begin{array}{l} 2.70 = a \\ 4.30 = b \end{array} \Rightarrow a+b = \textcircled{7} \text{ Ans.}$$

$$8.60$$

$$2 \times 4.30$$

$$2b$$

$$\frac{a^2 + b^2 + 2ab}{a+b}$$

$$\frac{a^2 + b^2 + 2ab}{a+b} = \frac{(a+b)^2}{\cancel{(a+b)}} = a+b$$

यदि, $35^y x = 7^y y = 5^y z = K$

तो बताइये $y+z=?$

$$\Rightarrow \begin{array}{l|l|l} 7^y y = K & 5^y z = K & 35^y x = K \\ 7 = K^y & 5 = K^z & 35 = K^x \end{array}$$

$$7 \times 5 = 35$$

$$K^y \times K^z = K^x$$

$$K^{y+z} = K^x$$

$$\boxed{y+z=x} \text{ Ans.}$$

$$\begin{array}{l|l} x^2 = y & x^3 = y \\ x = \sqrt{y} & x = \sqrt[3]{y} \\ = (y)^{1/2} & = (y)^{1/3} \end{array}$$

$$x^0 = 1$$

$$x = 3^a = 3^a$$

$$y = 9^b = (3^2)^b = 3^{2b}$$

$$z = 27^c = (3^3)^c = 3^{3c}$$

$$x^{bc} \cdot y^{ca} \cdot z^{ab} = 1$$

$$abc = ?$$

$\Rightarrow$

$$(3^a)^{bc} \cdot (3^{2b})^{ca} \cdot (3^{3c})^{ab} = 1$$

$$3^{abc} \cdot 3^{2abc} \cdot 3^{3abc} = 3^0$$

$$3^{6abc} = 3^0$$

$$6abc = 0$$

$$abc = 0 \checkmark$$

most
imp.

$$[(1+p)(1+p^2)(1+p^4)(1+p^8)(1+p^{16})(1-p)-1]$$

$$[(1-p^2)(1+p^2)(1+p^4)(1+p^8)(1+p^{16})-1] \quad \text{A } -p^{32}$$

$$[(1-p^4)(1+p^4)(1+p^8)(1+p^{16})-1] \quad \text{B } +p^{32}$$

$$[(1-p^8)(1+p^8)(1+p^{16})-1] \quad \text{C } (1-p)^{32}$$

$$[(1-p^{16})(1+p^{16})-1] \quad \text{D } (1+p^{32})$$

$$[(1-p^{32})-1] = \cancel{-p^{32}} = -p^{32}$$

$$(a+b)(a-b) = a^2 - b^2$$

$(x-2)$, दिऐ गए स्वीकरण $(x^2 + 3q, x - 2q)$ का एक गुणखण्ड (factor) है,

तो q का मान ज्ञात करें ?

$$\Rightarrow x - 2 = 0$$

$$x = 2$$

$$x^2 + 3q, x - 2q = 0$$

$$4 + 6q - 2q = 0$$

$$4 + 4q = 0$$

$$4q = -4$$

$$q = -1$$

$$\frac{x^3 + 6x^2 + 4x + K}{x+2}$$

Remainder
 $R=0$ (2) (4m)
 $K=?$

$$\Rightarrow x+2=0$$

$$x=-2$$

$$(-2)^3 + 6(-2)^2 + 4(-2) + K = 0$$

$$-8 + 24 - 8 + K = 0$$

$$8 + K = 0$$

$$\boxed{K = -8}$$

$$\frac{x^{100} + 2x^{99} + K}{(x+1)} \quad \begin{array}{l} R=0 \\ K=? \end{array}$$

$$x+1=0$$

$$x=-1$$

$$(-1)^{100} + 2(-1)^{99} + K$$

$$+1 - 2 + K = 0$$

$$-1 + K = 0$$

$$\boxed{K = +1}$$

$$\frac{x^5 - 9x^2 + 12x - 14}{x-3} \quad R = ?$$

$$x-3=0$$

$$x=3$$

$$(3)^5 - 9(3)^2 + 12 \times 3 - 14$$

$$243 - 81 + 36 - 14$$

$$162 + 22$$

$$\textcircled{184}$$

$$(a^4 - 1) = (a^4 - 1^4)$$

$$= (a^2)^2 - (1^2)^2$$

$$= (a^2 + 1)(a^2 - 1)$$

$$= (a - 1)(a + 1)(a^2 + 1)$$

$$= (a - 1)(a^3 + a + a^2 + 1)$$

$$\boxed{(a^4 - 1) = (a - 1)(a^3 + a^2 + a + a^0)}$$

$$\left(\frac{5^{y_4} - 1}{a^b}\right) \left(5^{3/4} + 5^{y_2} + 5^{y_4} + 1\right) = ?$$

$$a^4 - 1$$

$$(5^{y_4})^4 - 1$$

$$5^{y_4 \times 4} - 1$$

$$5 - 1 = \textcircled{4}$$