

Value putting Method

e1

coaching center

Concept:

① Formula based question'

SoS = 0*

Que: $(a+b)^2 - (a-b)^2 = ?$

- a) ab b) $2ab$ c) $a-b$ d) $4ab$

Put values of

Variables

$0, 1, -1, 2, \dots$

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

- a) 0 b) 1 c) 2 d) 3

② 'n' eqns. can fix values of 'n' variables:

$$\begin{array}{cc} 4 & 1 \\ a+b & = 5 \\ 5 & 0 \\ a=? & \rightarrow \text{Can't say} \end{array}$$

Variable $\rightarrow 2$

Eqn $\rightarrow 1$

Extra variables
 अति values
 अति अति $\rightarrow 0, 1, -1, 2, \dots$

eqn $\rightarrow a+b=2$

Expression $\rightarrow a+b$

$$x^2+2y=-1$$

$$x^2+2y$$

$$a+b=5$$

$$a-b=3$$

4 \downarrow \downarrow
 1

$$a+b=5$$

$$ab=3$$

$$a+b+c=7$$

$$abc=8$$

Exception: Sum of Squares = 0

a, b & c are real numbers

$$(a-2)^2 + (b-3)^2 + (c-4)^2 = 0$$

$$a-2=0 \quad \& \quad b-3=0 \quad \& \quad c-4=0$$

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429. The simplest form of expression $\frac{p^2-p}{2p^3+6p^2} + \frac{p^2-1}{p^2+3p} + \frac{p^2}{p+1}$

$\frac{p^2-p}{2p^3+p^2} + \frac{p^2-1}{p^2+3p} + \frac{(p^2)}{p+1}$ को सरल करें।

~~a) $2p^2$~~

~~b) $\frac{1}{2p^2}$~~

~~c) $p+3$~~

~~d) $\frac{1}{p+3}$~~

$p=0$

$\downarrow p=0$
 $\frac{1}{0} \Rightarrow \text{Not defined}$
X

$p=1$

$\frac{1}{2}$

coaching center

430. The value of $\frac{1}{a^2+ax+x^2} - \frac{1}{a^2-ax+x^2} + \frac{2ax}{a^4+a^2x^2+x^4}$

a) 2

b) 1

c) -1

d) 0

$$x=0$$

$$\frac{1}{a^2} - \frac{1}{a^2} = 0$$

coaching center

431. If $a + b = 1$, find the value of $a^3 + b^3 - ab - (a^2 - b^2)^2$

अगर $a + b = 1$ है तो $a^3 + b^3 - ab - (a^2 - b^2)^2$ का मान:

~~a) 0~~

1

b) 1

c) -1

d) 2

eqn

ques. / expression

$$1 - 1 = 0$$

coaching center

432. If $a + b = 1$ and $a^3 + b^3 + 3ab = k$, then the value of k is

अगर $a + b = 1$ और $a^3 + b^3 + 3ab = k$ तो k का मान:

~~a) 1~~ | 0

b) 3

c) 5

d) 7

$$1 = k$$

coaching center

433. If $x + y = 7$, then the value of $x^3 + y^3 + 21xy$ is

अगर $x + y = 7$ है तो $x^3 + y^3 + 21xy$ का मान:

a) 2437 0

b) 143

~~c) 343~~

d) 443

343

coaching center

434. If $x + y = 3$ then what is the value of $x^3 + y^3 + 9xy$?
यदि $x + y = 3$ हो, तो $x^3 + y^3 + 9xy$ का मान क्या है?
a) 15 b) 81 c) 27 d) 9

e1

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435. If $a + b = 1$, then $a^4 + b^4 - a^3 - b^3 - 2a^2b^2 + ab$ is equal to
यदि $a + b = 1$ है, तो $a^4 + b^4 - a^3 - b^3 - 2a^2b^2 + ab$ किसके
बराबर होगा ?

a) 1

b) 2

c) 4

~~d) 0~~

| - |

coaching center

436. If $a^2 + b^2 = 2$ and $c^2 + d^2 = 1$ then the value $(ad - bc)^2 + (ac + bd)^2$ is

अगर $a^2 + b^2 = 2$ और $c^2 + d^2 = 1$ तो $(ad - bc)^2 + (ac + bd)^2$:

- a) $\frac{4}{9}$ $\sqrt{2}$ 0 b) $\frac{1}{2}$ 1 0 c) 1 ~~d) 2~~

2

1+1=2

E=2
V=4

coaching center

437. If $\left[\sqrt{a^2 + b^2 + ab}\right] + \left[\sqrt{a^2 + b^2 - ab}\right] = 1$, then what is the value of $(1 - a^2)(1 - b^2)$?

यदि $\left[\sqrt{a^2 + \cancel{b^2} + \cancel{ab}}\right] + \left[\sqrt{a^2 + \cancel{b^2} - \cancel{ab}}\right] = 1$ हो, तो $(1 - a^2)(1 - b^2)$ का मान क्या होगा?

a) $\frac{1}{4}$

b) $\frac{4}{7}$

c) $\frac{5}{4}$

d) $\frac{3}{4}$

$b=0$

$a + a = 1$

$a = \frac{1}{2}$

$\frac{3}{4} \times 1$

coaching center

438. If $\sqrt{(1-p^2)(1-q^2)} = \frac{\sqrt{3}}{2}$. Then what is the value of $\sqrt{2p^2 + 2q^2 + 2pq} + \sqrt{2p^2 + 2q^2 - 2pq}$?

यदि $\sqrt{(1-p^2)(1-q^2)} = \frac{\sqrt{3}}{2}$ है, तो $\sqrt{2p^2 + 2q^2 + 2pq} + \sqrt{2p^2 + 2q^2 - 2pq}$ का मान क्या है?

a) 2

~~b) $\sqrt{2}$~~

c) 1

d) none of the these

$$q=0$$

$$\sqrt{1-p^2} = \frac{\sqrt{3}}{2}$$

$$\Rightarrow 1-p^2 = \frac{3}{4}$$

$$\Rightarrow p^2 = \frac{1}{4}$$

$$\Rightarrow p = \pm \frac{1}{2}$$

$$\sqrt{2 \times \frac{1}{4}} + \sqrt{2 \times \frac{1}{4}}$$

$$= \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} = \frac{2}{\sqrt{2}} = \sqrt{2}$$

439. If $x = \sqrt[3]{a + \sqrt{(a^2 + b^3)}} + \sqrt[3]{a - \sqrt{(a^2 + b^3)}}$ then $x^3 + 3bx$ is equal to

अगर $x = \sqrt[3]{a + \sqrt{(a^2 + b^3)}} + \sqrt[3]{a - \sqrt{(a^2 + b^3)}}$ है तो $x^3 + 3bx$ किसके समान है?

a) 0

b) a

~~c) 2a~~

d) 2

2a

b=0

$$x = \sqrt[3]{2a}$$
$$x^3 = 2a$$

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440. If $x_1x_2x_3 = 4(4 + x_1 + x_2 + x_3)$, then what is the value of $\left[\frac{1}{2+x_1}\right] + \left[\frac{1}{2+x_2}\right] + \left[\frac{1}{2+x_3}\right]$?

यदि $x_1x_2x_3 = 4(4 + x_1 + x_2 + x_3)$ हो, तो $\left[\frac{1}{2+x_1}\right] + \left[\frac{1}{2+x_2}\right] + \left[\frac{1}{2+x_3}\right]$ का मान क्या है?

a) 1

~~b) $\frac{1}{2}$~~

c) 2

d) $\frac{1}{3}$

$$x_2 = x_3 = 0$$

$$0 = y(y + x_1)$$

$$-y = x_1$$

$$-\frac{1}{2} + \frac{1}{2} + \frac{1}{2}$$

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५५१. Find $ab(a + b) + bc(b + c) + ca(c + a) + 3abc$, if $a + b + c = 17$ and $ab + bc + ca = 6$?

यदि $a + b + c = 17$ और $ab + bc + ca = 6$ हो तो $ab(a + b) + bc(b + c) + ca(c + a) + 3abc$ का मान ज्ञात करें?

a) 42

b) 119

~~c) 102~~

d) 23

$$C = 0$$

$$a + b = 17$$

$$ab = 6$$

$$ab(a + b) = ?$$

coaching center

442. If $\frac{a}{b+c} + \frac{b}{a+c} + \frac{c}{a+b} = -3$ and $a^2 + c^2 = 2b^2$ then $ab + bc + ac = ?$

यदि $\frac{a}{b+c} + \frac{b}{a+c} + \frac{c}{a+b} = -3$ और $a^2 + c^2 = 2b^2$ तो ~~$ab + bc + ac = ?$~~

(दिया गया है कि $a + b + c \neq 0$)

- a) c b) c^2 c) $\frac{b^2}{3}$ ~~d) $-b^2$~~

$bc = ?$

$a = 0$

$$\frac{b}{c} + \frac{c}{b} = -3$$

$$c^2 = 2b^2$$

$$\Rightarrow \frac{b^2 + c^2}{bc} = -3$$

$$\frac{\cancel{b^2}}{-3} \leftarrow \Rightarrow \frac{b^2 + c^2}{-3} = bc$$

coaching center

443. $ab(a - b) + bc(b - c) + ca(c - a)$ is equal to:

$ab(a - b) + bc(b - c) + ca(c - a)$ निम्नलिखित में से किसके बराबर

हैं? $-ab(a+b)$

~~a) $(a + b)(b - c)(c - a)$~~

~~b) $(a - b)(b - c)(c - a)$~~

$-ab(a-b)$

$\rightarrow ab(a-b)$

$-ab(a-b)$

~~b) $(a - b)(b + c)(c - a)$~~

~~d) $(b - a)(b - c)(c - a)$~~

C = 0

coaching center

444. $x(y-z)(y+z) + y(z-x)(z+x) + z(x-y)(x+y)$ is equal to:

$x(y-z)(y+z) + y(z-x)(z+x) + z(x-y)(x+y)$ बराबर है :

~~a) $(x+y)(y+z)(z+x)$~~

~~c) $(x+y)(z-y)(x-z)$~~

~~b) $(x-y)(x-z)(z-y)$~~

~~d) $(y-x)(z-y)(x-z)$~~

$Z=0$

$$\begin{aligned} & xy^2 - x^2y \\ &= xy(y-x) \end{aligned}$$

$(x+y)$

$-xy(y-x)$

$-xy(x-y)$

coaching center

445. Find the value of $(a + b + c)^4 - (b + c)^4 - (c + a)^4 - (a + b)^4 + a^4 + b^4 + c^4$.

$(a + b + c)^4 - (b + c)^4 - (c + a)^4 - (a + b)^4 + a^4 + b^4 + c^4$ का मान ज्ञात करो ।

a) ~~12abc~~ $(a + b + c)$
c) 2

b) $abc(a + b + c)$
d) abc

$$a = b = c = 1$$

$$81 - 48 + 3$$

$$= 84 - 48 = 36$$

coaching center

446. Find the value of $(bc + ca + ab)^3 - b^3c^3 - c^3a^3 - a^3b^3$.

$(bc + ca + ab)^3 - b^3c^3 - c^3a^3 - a^3b^3$ का मान ज्ञात करो ।

~~a) $3abc(a + b)(b + c)(c + a)$ 24~~

~~b) $(a + b)(b + c)(c + a)$ 8~~

~~c) $(a - b)(b - c)(c - a) = 0$~~

~~d) $24abc$ 24~~

$\rightarrow 3 \times 8 \times 64$

$24 \times 8 = 192$

$a = b = c = 1$

$27 - 3 = 24$

$a = b = c = 2$

$$\begin{array}{r} 1728 - 64 \times 3 \\ - 182 \\ \hline 1546 \end{array}$$

coaching center

447. Find the value of $a^4(b^2 - c^2) + b^4(c^2 - a^2) + c^4(a^2 - b^2)$.

$a^4(b^2 - c^2) + b^4(c^2 - a^2) + c^4(a^2 - b^2)$ का मान ज्ञात करो ।

a) $3a^2b^2c^2$ 0

b) $(a^2 - b^2)(b^2 - c^2)(c^2 - a^2)$ $-a^2b^2(a^2 - b^2)$

~~c) $(a^2 - b^2)(b^2 - c^2)(c^2 - a^2)$~~ $+a^2b^2(a^2 - b^2)$

d) $(a^2 + b^2)(b^2 + c^2)(c^2 + a^2)$

$\rightarrow a^2b^2(a^2 + b^2)$

$c=0$

$a^4b^2 - b^4a^2$

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

coaching center

448. Find the value of $\frac{a^3(b+c)}{(a-b)(a-c)} + \frac{b^3(c+a)}{(b-c)(b-a)} + \frac{c^3(a+b)}{(c-a)(c-b)}$.

$\frac{a^3(b+c)}{(a-b)(a-c)} + \frac{b^3(c+a)}{(b-c)(b-a)} + \frac{c^3(a+b)}{(c-a)(c-b)}$ का मान ज्ञात करो ।

a) abc

b) $a + b + c$

c) $ab + bc + ca$

d) 3

C=0

$$\frac{a^3b}{a(a-b)} + \frac{ab^3}{b(b-a)} \rightarrow \frac{a^2b - ab^2}{a-b} = \frac{ab(a-b)}{a-b}$$

$$= \frac{a^3b^2 - a^2b^3}{ab(a-b)} = \frac{a^2b^2(a-b)}{ab(a-b)}$$

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$$y=0 \rightarrow 0$$

$$x=0 \rightarrow -y^4$$

$$449. (4x^3y - 6x^2y^2 + 4xy^3 - y^4)$$

can be expressed as:

$$(4x^3y - 6x^2y^2 + 4xy^3 - y^4)$$

को कैसे लिखा जा सकता है:

~~a) $(x-y)^4 - x^4 + y^4$~~

~~b) $(x+y)^4 - y^4$~~

~~c) $(x+y)^4 - x^4$~~

d) $x^4 - \underline{(x-y)^4} - y^4$

coaching center

$$z = 0$$

$$\frac{(x+y)xy}{(x+y)xy} = 1$$

450. What is the simplified value of

$$\frac{(x+y+z)(xy+yz+zx)-xyz}{(x+y)(y+z)(z+x)} ?$$

$$\frac{(x+y+z)(xy+yz+zx)-xyz}{(x+y)(y+z)(z+x)}$$

का सरलीकृत मान

कितना होगा?

a) y

b) z

~~c) 1~~

d) x

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उदा. Simplify the given expression.

दिए गए व्यंजक का मान ज्ञात करें।

$$x=0 \rightarrow \text{N.D}$$

$$x=1$$

$$-1 - 27 = -28$$

$$\left(x - \frac{2}{x}\right)^3 - \left(x + \frac{2}{x}\right)^3$$

$$\text{a) } -4 \left(3x + \frac{4}{x^3}\right) = -28$$

$$\text{b) } -4 \left(3x - \frac{4}{x^3}\right) \times$$

$$\text{c) } -4 \left(x + \frac{4}{x^3}\right)$$

$$\text{d) } 2 \left(x - \frac{4}{x^3}\right)$$

coaching center

Q52. If $(4x + 2y)^3 + (4x - 2y)^3 = 16(Ax^3 + Bxy^2)$,
then what is the value of $\frac{1}{2}\sqrt{A^2 + B^2}$?

यदि $(4x + 2y)^3 + (4x - 2y)^3 = 16(Ax^3 + Bxy^2)$,

तो $\frac{1}{2}\sqrt{A^2 + B^2}$ का मान क्या है?

a) 8

b) 3

~~c) 5~~

d) 7

$$2 \left(\frac{64x^3}{8} + \frac{48xy^2}{6} \right)$$

$$A=8, B=6$$

$$\frac{1}{2} \times 10 = 5$$

$$y=0, x=1$$

$$\frac{64}{4} + \frac{64}{4} = 16(A)$$

$$8 = A$$

$$x=1, y=1$$

$$\frac{216}{27} + \frac{8}{27} = \frac{16}{27}(8+B)$$

$$14$$

$$6=B$$

453. If $(3x + 2y)^3 + (3x - 2y)^3 = 3kx(3x^2 + 4y^2)$, then the value of k will be:

यदि $(3x + 2y)^3 + (3x - 2y)^3 = 3kx(3x^2 + 4y^2)$, है, तो k का मान ज्ञात करें।

a) 18

b) 9

c) 3

d) 6 ✓

$$x=1, y=0$$

$$54 = 27 + 27 = k \times 3$$
$$6$$

coaching center

454. If $x = a + \frac{1}{a}$ and $y = a - \frac{1}{a}$, then the value of $x^4 + y^4 - 2x^2y^2 = ?$

अगर $x = a + \frac{1}{a}$ और $y = a - \frac{1}{a}$ है तो $x^4 + y^4 - 2x^2y^2 = ?$

a) 24

b) 18

~~c) 16~~

d) 12

$$a=1$$

$$x=2$$

$$y=0$$

$$\sqrt{a} \rightarrow 1$$

coaching center

455. If $x = \frac{a}{b} + \frac{b}{a}$, $y = \frac{b}{c} + \frac{c}{b}$ and $z = \frac{c}{a} + \frac{a}{c}$, then what is the value of $xyz - x^2 - y^2 - z^2$?

यदि $x = \frac{a}{b} + \frac{b}{a}$, $y = \frac{b}{c} + \frac{c}{b}$ तथा $z = \frac{c}{a} + \frac{a}{c}$ है, तो $xyz - x^2 - y^2 - z^2$ का मान क्या है?

~~a) -4~~

b) 2

c) -1

d) -6

~~8-4-4-4~~

$$a=b=c=1$$

$$x=2, y=2, z=2$$

coaching center

456. If $a + b + c = 0$, then the value of $\frac{a^2+b^2+c^2}{a^2-bc}$ is

अगर $a + b + c = 0$ है तो $\frac{a^2+b^2+c^2}{a^2-bc}$ का मान:

a) 0

b) 1

d) 3

$$b+c = -a$$

$$\Rightarrow b^2+c^2+2bc = a^2$$

$$\Rightarrow \underset{a^2+}{b^2+c^2} = \underset{a^2+}{a^2} - 2bc$$

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

$$\frac{2}{1}$$

457. If $X + Y + Z = 0$, then what is the value of $\frac{3y^2+x^2+z^2}{2y^2-xz}$?

यदि $X + Y + Z = 0$ हो, तो $\frac{3y^2+x^2+z^2}{2y^2-xz}$ का मान क्या है?

~~a) 2~~

b) 1

c) $\frac{3}{2}$

d) $\frac{5}{3}$

$\frac{4}{2}$

coaching center

Q58. If $x + y + z = 0$, then the value of

$(x^2 + y^2 + z^2) \div (z^2 - xy)$ is:

यदि $x + y + z = 0$ है, तो $(x^2 + y^2 + z^2) \div (z^2 - xy)$ का मान है:

a) -2

b) -1

~~c) 2~~

d) 1

$$\frac{2}{1}$$

$$\frac{x^2 + y^2 + z^2}{z^2 - xy}$$

coaching center

459. If $a + b + c = 0$, then find the value of $\frac{(a^2+b^2+c^2)^2}{a^2b^2+b^2c^2+c^2a^2}$.

यदि $a + b + c = 0$ है, तो $\frac{(a^2+b^2+c^2)^2}{a^2b^2+b^2c^2+c^2a^2}$ का मान ज्ञात करें।

a) 1

b) 2

c) 3

~~d) 4~~

$$\frac{4}{1}$$

coaching center

460. If $a + b + c = 0$, then find the value of $\frac{a^2b^2 + b^2c^2 + c^2a^2}{a^4 + b^4 + c^4}$.

यदि $a + b + c = 0$ है, तो $\frac{a^2b^2 + b^2c^2 + c^2a^2}{a^4 + b^4 + c^4}$ का मान ज्ञात करें।

a) $\frac{2}{3}$

b) $\frac{3}{2}$

~~c) $\frac{1}{2}$~~

d) $\frac{3}{4}$

coaching center

461. If $a + b + c = 2s$, then $\frac{(s-a)^2 + (s-b)^2 + (s-c)^2 + s^2}{a^2 + b^2 + c^2}$

अगर $a + b + c = 2s$ है तो $\frac{(s-a)^2 + (s-b)^2 + (s-c)^2 + s^2}{a^2 + b^2 + c^2}$:

a) $a^2 + b^2 + c^2$

b) 0

~~c) 1~~

d) 2

$$\frac{1+1}{2} = 1$$

coaching center

462. If $ab + bc + ac = 0$ then the value of $\left(\frac{1}{a^2-bc} + \frac{1}{b^2-ac} + \frac{1}{c^2-ab}\right)$ is

अगर $ab + bc + ac = 0$ है तो $\left(\frac{1}{a^2-bc} + \frac{1}{b^2-ac} + \frac{1}{c^2-ab}\right) = ?$
~~a) 0~~ a) $\frac{1}{abc}$ b) 1 c) 3 d) $a + b + c$

$$\frac{1}{a} + \frac{1}{b} + \frac{1}{c} = 0$$

2 -1 -1

$$a = \frac{1}{2} \quad b = -1 \quad c = -1$$

$$\frac{1}{\frac{1}{4} - 1} + \frac{1}{1 + \frac{1}{2}} + \frac{1}{1 + \frac{1}{2}}$$

$$= -\frac{4}{3} + \frac{2}{3} + \frac{2}{3}$$

$$= 0$$

coaching center

$$ab+bc+ca=0$$

$$ab+ca = -bc$$

$$\frac{1}{a^2+ab+ac} + \frac{1}{b^2+ab+bc} + \frac{1}{c^2+bc+ca}$$

$$= \frac{1}{a(a+b+c)} + \frac{1}{b(a+b+c)} + \frac{1}{c(a+b+c)}$$

$$= \frac{bc+ca+ab}{abc(a+b+c)} = \frac{0}{abc(a+b+c)} = 0$$

Q63. Find the value of $a(b-c)^3 + b(c-a)^3 + c(a-b)^3$.

HW

$a(b-c)^3 + b(c-a)^3 + c(a-b)^3$ का मान ज्ञात करो।

~~a) $3abc \geq 0$~~

~~b) $(a-b)(b-c)(c-a) = -ab(a-b)$~~

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

~~d) $(a+b)(b+c)(c+a)(a+b+c) = ab(a+b)(a+b) = ab(b^2-a^2)$~~

$c=0$

$\rightarrow ab^3 - ba^3$

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

coaching center

464. If $x^4 + 2x^3 + ax^2 + bx + 9$ is a perfect square, where a and b are positive real numbers, then the value of a and b are

यदि $x^4 + 2x^3 + ax^2 + bx + 9$ एक सम्पूर्ण वर्ग है जहाँ a तथा b धनात्मक वास्तविक संख्या है तो a और b का मान क्या होगा ?

~~a) $a = 5, b = 6$~~

~~b) $a = 6, b = 7$~~

~~c) $a = 7, b = 6$~~

~~d) $a = 7, b = 8$~~

$$x=1 \rightarrow 1+2+a+b+9 = a+b+12$$

$$x=-1 \rightarrow 1-2+a-b+9 = a-b+8$$

coaching center

465. If $\frac{x+y}{z} = 2$, then what is the value of $\left[\frac{y}{y-z}\right] + \left[\frac{x}{x-z}\right]$?

यदि $\frac{x+y}{z} = 2$ है, तो $\left[\frac{y}{y-z}\right] + \left[\frac{x}{x-z}\right]$ का मान क्या है?

a) 0

1

b) 1

~~c) 2~~

d) -1

$$\frac{2}{1}$$

coaching center

466. If $x = a^{\frac{1}{2}} + a^{-\frac{1}{2}}$, $y = a^{\frac{1}{2}} - a^{-\frac{1}{2}}$ then value of $(x^4 - x^2y^2 - 1) + (y^4 - x^2y^2 + 1)$ is

अगर $x = a^{\frac{1}{2}} + a^{-\frac{1}{2}}$, $y = a^{\frac{1}{2}} - a^{-\frac{1}{2}}$ है तो $(x^4 - x^2y^2 - 1) + (y^4 - x^2y^2 + 1)$ का मान पता करो।

a) 16

b) 13

c) 12

d) 14

$$15 + 1 = 16$$

$$a=1$$

$$x = \sqrt{a} + \frac{1}{\sqrt{a}} = 2$$

$$y = \sqrt{a} - \frac{1}{\sqrt{a}} = 0$$

coaching center

467. If $(a + b + 4)\{ab + 4(a + b)\} - 4ab = 0$ and $a \neq -4, b \neq -4$, then

$\left\{ \frac{1}{(a+b+4)^{117}} - 2^{-234} \right\}$ is equal to:

a) $\frac{1}{4^{117}}$

b) $\frac{1}{2^{117}}$

c) $-\frac{1}{2^{234}}$

~~d) 0~~

$b=0$

$(a+4)(4a) = 0$

$a+4=0$

$\Rightarrow a=-4$

X

$4a=0$

$a=0$

$$\begin{aligned} & \frac{1}{4^{117}} - \frac{1}{2^{234}} \\ &= \frac{1}{(2^2)^{117}} - \frac{1}{2^{234}} \\ &= \frac{1}{2^{234}} - \frac{1}{2^{234}} = 0 \end{aligned}$$

468. If $a + b + c = 1$ and $a^3 + b^3 + c^3 = 4$, then find $\frac{1}{a+bc} + \frac{1}{b+ac} + \frac{1}{c+ab} = ?$

यदि $\underline{a + b + c = 1}$ और $\underline{a^3 + b^3 + c^3 = 4}$ हो, तो $\frac{1}{a+bc} + \frac{1}{b+ac} + \frac{1}{c+ab} = ?$

a) 1

b) -1

~~c) -2~~

d) 3

$C=0$

$$a+b=1$$

$$a^3 + b^3 = 4$$



$$1 - 3ab = 4$$

$$-3 = 3ab$$
$$-1 = ab$$

$$\frac{1}{a} + \frac{1}{b} + \frac{1}{ab}$$

$$= \frac{a+b+1}{ab}$$

$$= \frac{2}{-1}$$

coaching center

Value putting X

$$\begin{aligned} a+b &= 5 \\ ab &= 6 \\ &\quad \swarrow \searrow \\ &\quad 3 \quad 2 \end{aligned}$$

Number crunching

- easily guessable values $\sqrt{12}$ question set

coaching center

469. For $a > b$. if $a + b = 5$ and $ab = 6$, then the value of $a^2 - b^2$ is
अगर $a > b$ और $a + b = 5$ और $ab = 6$ तो $a^2 - b^2$ का मान:

a) 1 3 2 b) 3

~~c) 5~~

d) 7
3 2 9-4

e1

coaching center

470. If $x - y = 2$, $xy = 24$, then the value of $(x^2 + y^2)$ is

अगर $x - y = 2$, $xy = 24$, तो $(x^2 + y^2)$ का मान:

a) 25

b) 36

c) 63

d) 52

6, 4

36 + 16

coaching center

471. If $x^3 + y^3 = 35$ and $x + y = 5$, then the value of $\frac{1}{x} + \frac{1}{y}$ will be

अगर $x^3 + y^3 = 35$ और $x + y = 5$, तो $\frac{1}{x} + \frac{1}{y}$ का मान:

a) $\frac{1}{3}$

~~b) $\frac{5}{6}$~~ 2 3
8 + 27

c) 6

d) $\frac{2}{3}$

$$\frac{1}{2} + \frac{1}{3} = \frac{5}{6}$$

$$\frac{x+y}{xy} = \frac{5}{6}$$

coaching center

472. Given that $x^3 + y^3 = 72$ and $xy = 8$ with $x > y$, then the value of $x - y = ?$

अगर $x^3 + y^3 = 72$ और $xy = 8$; $x > y$, तो $x - y = ?$

a) 6

~~b) 2~~ 4 2 4 2 8

d) 9

64, 8

coaching center

473. If $p + m = 6$ and $p^3 + m^3 = 72$, then the value of pm is
अगर $p + m = 6$ और $p^3 + m^3 = 72$ है तो pm का मान:

a) 6 4 2

b) 9

c) 12

d) 8 ✓

e1

coaching center

474. If $a^3 - b^3 = 56$ and $a - b = 2$ then value of $a^2 + b^2$ will be
अगर $a^3 - b^3 = 56$ और $a - b = 2$ तो $a^2 + b^2$ का मान:

a) 48

~~b) 20~~ 2 0 c) 22 16 + 4 d) 5
3 1
4 2 ✓

$$64 - 8 = 56$$

coaching center

475. If $a - b = 3$ and $a^3 - b^3 = 27$ then $(a + b)$ is equal to

अगर $a - b = 3$ और $a^3 - b^3 = 27$ है तो $(a + b)$ समान है:

~~a) 3~~ 3 0

b) 5
27-0

c) 7

d) 9

e1

coaching center

476. If $a^3 + b^3 = 9$ and $a + b = 3$, then the value of $\frac{1}{a} + \frac{1}{b}$ is

अगर $a^3 + b^3 = 9$ और $a + b = 3$ है तो $\frac{1}{a} + \frac{1}{b}$ का मान:

a) $\frac{1}{2}$

~~b) $\frac{3}{2}$~~ $\frac{3}{2}$ $\frac{3}{1}$ $\frac{0 \times}{1}$ ✓

c) $\frac{5}{2}$

d) -1

$\frac{a+b}{ab} = \frac{3}{2}$

coaching center