

RAILWAY GROUP D

 *Mahendra's*

MATHS



== अंतिम प्रहार ==

ALGEBRA

(बीजगणित)



LIVE | 06:30 PM

If $a = 23$ and $b = -29$ then the value of $25a^2 + 40ab + 16b^2$ is :

यदि $a = 23$ तथा $b = -29$ हो, तो $25a^2 + 40ab + 16b^2$ का मान क्या होगा ?

(1) 1

(2) -1

(3) 0

(4) 2

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

$$(5a + 4b)^2$$

$$\left\{ 5 \times 23 + 4 \times (-29) \right\}^2$$

$$\left\{ 115 - 116 \right\}^2 = (-1)^2 = 1$$



If $a + b = 5$, $a^2 + b^2 = 13$, then the value of $(a - b)$
(where $a > b$)—

यदि $a + b = 5$, $a^2 + b^2 = 13$, तो $a - b$ का मान बताएँ (जहाँ
 $a > b$)—

(3)

(1) 1

(2) 2

(2) - 2

(3) 2

(4) - 1

By Hit & trial method

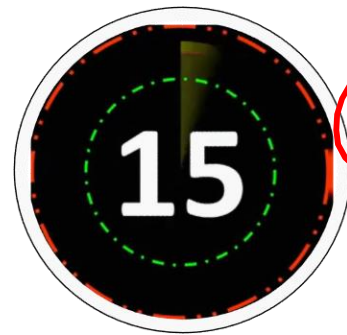
$(a - b)$

↓

$(3 - 2) = 1$

$(3)^2 + (2)^2$

$9 + 4 = 13$



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

If $x^2 - y^2 = 80$ and $x - y = 8$, then the average of x and y is

यदि $x^2 - y^2 = 80$ और $x - y = 8$, तो x और y का औसत है—

(1) 2

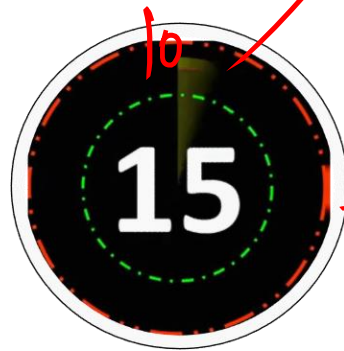
(2) 3

(3) 4

(4) 5

$$x^2 - y^2 = \underline{(x+y)(x-y)}$$

$$80 = (x+y) \times 8$$



$$10 = x + y$$

$$\frac{(x+y)}{2} = \frac{10}{2} = 5$$

If $x^2 + y^2 - 2x + 6y + 10 = 0$, then the value of $x^2 + y^2$:

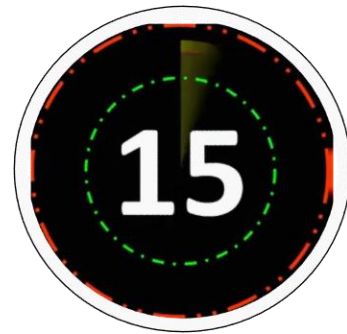
यदि $x^2 + y^2 - 2x + 6y + 10 = 0$ हो, तो $(x^2 + y^2)$ का मान होगा :

(1) 4

(2) 6

(3) 8

(4) 10



If $x^2 + y^2 - 4x - 4y + 8 = 0$, then the value of $x - y$ is

यदि $x^2 + y^2 - 4x - 4y + 8 = 0$, तो $x - y$ का मान है—

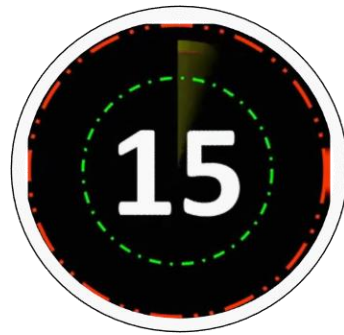
- (1) 4 (2) -4 (3) 0 (4) 8



If $a = 4.965$, $b = 2.343$ and $c = 2.622$, then the value of $a^3 - b^3 - c^3 - 3abc$ is :

यदि $a = 4.965$, $b = 2.343$ और $c = 2.622$ हो, तो $a^3 - b^3 - c^3 - 3abc$ का मान है—

- (1) -2 (2) -1 (3) 0 (4) 9.9^3



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

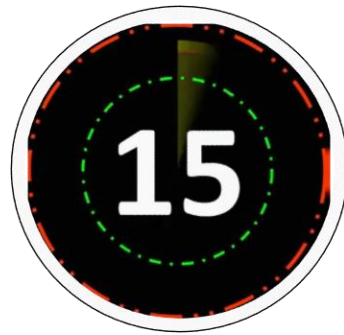
यदि $x + y = 7$ हो, तो $x^3 + y^3 + 21xy$ का मान होगा—

(1) 243

(2) 143

(3) 343

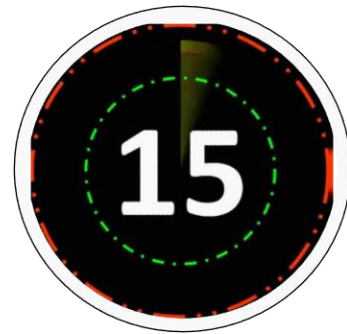
(4) 443



$(y - z)^3 + (z - x)^3 + (x - y)^3$ equal to /बराबर होगा :

(1) $3 (y - z) (z + x) (y - x)$ (2) $(x - y) (y + z)(x - z)$

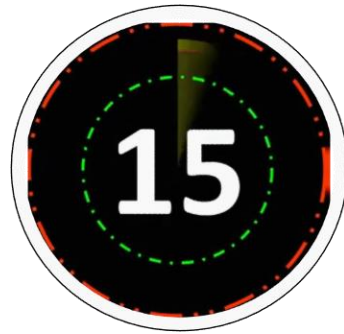
(3) $3 (y - z) (z - x) (x - y)$ (4) $(y - z) (z - x) (x - y)$



If $x + y = z$, then the expression $x^3 + y^3 - z^3 + 3xyz$ will be equal to :

यदि $x + y = z$ हो, तो व्यंजक $x^3 + y^3 - z^3 + 3xyz$ का मान क्या होगा?

- (1) 0 (2) $3xyz$ (3) $-3xyz$ (4) z^3



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

$\frac{1}{b}$ is

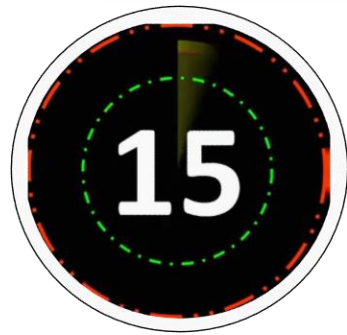
यदि $a^3 + b^3 = 9$ और $a + b = 3$ है, तो $\frac{1}{a} + \frac{1}{b}$ का मान है—

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

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

(3) $\frac{5}{2}$

(4) -1



If $x = 997$, $y = 998$ and $z = 999$, then the value of $x^2 + y^2 + z^2 - xy - yz - zx$ is

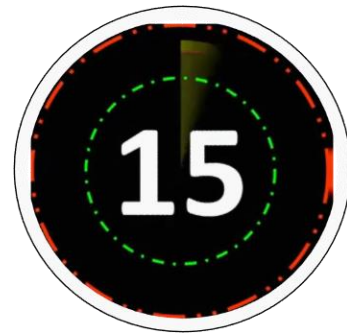
यदि $x = 997$, $y = 998$ और $z = 999$ है, तो $x^2 + y^2 + z^2 - xy - yz - zx$ का मान है—

(1) 0

(2) 1

(3) - 1

(4) 3



If $p = 99$, then the value of $p(p^2 + 3p + 3)$ is
 यदि $p = 99$ तो $p(p^2 + 3p + 3)$ का मान क्या होगा?

(1) 10000000

(2) 999000

(3) 999999

(4) 990000



$$p^3 + 3p^2 \cdot 1 + 3p + (1)^3 - (1)$$

$$(p)^3 + 3p^2 \cdot 1 + 3 \cdot p \cdot (1)^2 + (1) - 1$$

$$(p+1)^3 - 1 = (99+1)^3 - 1 = \frac{1000000 - 1}{999999}$$



If $a^2 + b^2 + c^2 + 3 = 2(a + b + c)$, then the value of $(a + b + c)$ is $2a + 2b + 2c$

यदि $a^2 + b^2 + c^2 + 3 = 2(a + b + c)$ तो $(a + b + c)$ का मान है—

(1) 2

(2) 3

(3) 4

(4) 5



a^2

If $a^2 + b^2 + c^2 = 2(a - b - c) - 3$, then the value of $(a + b + c)$ is—

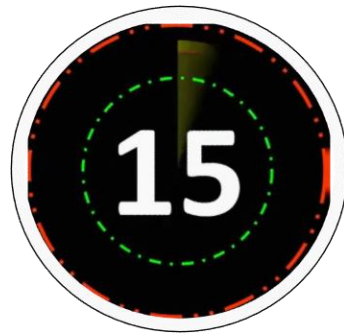
यदि $a^2 + b^2 + c^2 = 2(a - b - c) - 3$, तो $(a - b + c)$ का मान है—

(1) -1

(2) 3

(3) 1

(4) -2



If $x + y + z = 0$, then the value of $\frac{x^2 + y^2 + z^2}{x^2 - yz}$ is

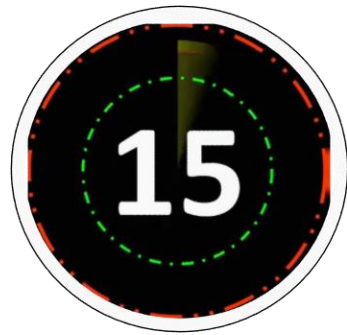
यदि $x + y + z = 0$, तो $\frac{x^2 + y^2 + z^2}{x^2 - yz}$ का मान क्या है?

(1) -1

(2) 0

(3) 1

(4) 2



If $\frac{2p}{p^2 - 2p + 1} = \frac{1}{4}$, then the value of $\left(p + \frac{1}{p}\right)$ is

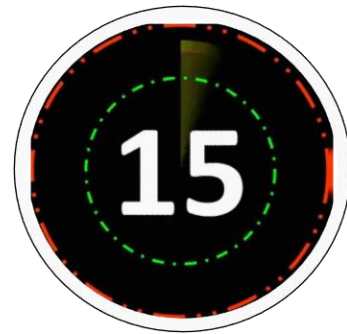
यदि $\frac{2p}{p^2 - 2p + 1} = \frac{1}{4}$, तो $\left(p + \frac{1}{p}\right)$ का मान क्या है ?

(1) 7

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

(3) 1

(4) 10



If $t^2 - 4t + 1 = 0$, then the value of $t^3 + \frac{1}{t^3}$ is

यदि $t^2 - 4t + 1 = 0$, तो $t^3 + \frac{1}{t^3}$ का मान क्या होगा ?

(1) 44

(2) 48

(3) 52

(4) 64

