



Mahendra's



SSC CGL/CPO/CHSL

MATHS

ALGEBRA

(बीजगणित)

PART-2

Most Asked Questions By SSC

LIVE

06:30 PM





Chhavi Saxena 22 hours ago

Home work answer is option B (0)

$$-y^3 + y^3 = 0$$

Very Nice Session Sir

Thank You very much sir 🙌🙌🙌🙌🙌🙌

👍 🗨️ REPLY

▶ [View reply from Mahendras : Online Videos For Govt. Exams](#)



ANU JAISWAL 22 hours ago

Hw:- 0 Thank you sir for the session 🙌🙌

👍 🗨️ REPLY

▶ [View reply from Mahendras : Online Videos For Govt. Exams](#)



Tanu Vishwakarma 20 hours ago

Homework answer.....(0)

Thank U so much sir for this session.

👍 🗨️ REPLY

▶ [View reply from Mahendras : Online Videos For Govt. Exams](#)



creative sg 22 hours ago

Answer : 0

Nice session sir

👍 🗨️ REPLY

▶ [View reply from Mahendras : Online Videos For Govt. Exams](#)



arun ch mandal 21 hours ago

ans is option b

good session sir

thank you sir

👍 🗨️ REPLY

▶ [View reply from Mahendras : Online Videos For Govt. Exams](#)



DEEKSHA SHARMA 19 hours ago

Home answer is 0

nice session sir 🙌🙌🙌

👍 🗨️ REPLY

▶ [View reply from Mahendras : Online Videos For Govt. Exams](#)





T@nu... 😊 19 hours ago

Option -b
(0) is the rgt answer

👍 🗨️ REPLY

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



AYAN PRAMANIK 22 hours ago

B) 0 ... nice class sir

👍 🗨️ REPLY

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



Soumen Sinha 22 hours ago

0 right answer ✓

👍 🗨️ REPLY

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



Toufiqul Islam 13 minutes ago

Ans is 0 option no b

👍 🗨️ REPLY



Janardhana Gupta 22 hours ago

Home work question ka answer 0 sir

👍 🗨️ REPLY

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



Muskan Raj 22 hours ago

Answer : 0

👍 🗨️ REPLY

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



Mohd Irfan 22 hours ago

Answer: 0

👍 🗨️ REPLY

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



Prashant Rajput 22 hours ago

Answer is 0 🙌

👍 🗨️ REPLY

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)





ARNAB DEBROY 22 hours ago

b)0

  **REPLY**

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



MONOJIT 21 hours ago

Answer 0

  **REPLY**

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



Nidhi Gupta 21 hours ago

0 hw


  **REPLY**

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



Sukanta sen 22 hours ago



Ans 0

  **REPLY**



Ankit Kumar 22 hours ago

0


  **REPLY**

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



Shivani Sharma 22 hours ago

0


  **REPLY**

▼ [View reply from Mahendras : Online Videos For Govt. Exams](#)



If $\left(\frac{x}{y}\right) + \left(\frac{y}{x}\right) = 1$, then what is the value of $(x^3 + y^3)$?

01:00

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

(D). **Given:** $x + \frac{1}{x} = -1$

Conclusion: $x^3 = 1$

Ex. 66 If $a + \frac{1}{a} = -1$ find $a^3 + 3 = ?$

If $x = -1 - \frac{1}{x}$,

(i) $x^{200} - x^{197} + x^{160} - x^{157} + x^{94} - x^{91} + x^{76} - x^{73} + x^{15} - x^{12} + x^3 - 1 = ?$

If $x = -1 - \frac{1}{x}$,

(ii) $x^{27} + \frac{1}{x^{27}} = ?$

(iii) $x^{16} + \frac{1}{x^{16}} = ?$

If $x = -1 - \frac{1}{x}$,

$$x^{18} + x^{15} + x^{12} + x^9 + x^6 + x^5 + x^4 + x^3 + 1 = ?$$



(E). **Given:** $x + \frac{1}{x} = \sqrt{3}$ or $\left(x + \frac{1}{x}\right)^2 = 3$ or $\left(x^2 + \frac{1}{x^2}\right) = 1$

Conclusion: (a) $x^6 = -1$

(b) If the difference of power of two term of x is 6 then sum of both term will be zero.

Ex. 68 $x^{18} + x^{12} = 0$, $x^{20} + x^{14} = 0$

If $x + \frac{1}{x} = \sqrt{3}$ find

(1) $x^{506} + x^{500} + x^{206} + x^{200} + x^{100} + x^{94} + x^{50} + x^{44} + x^{18} + x^{12}$
 $+ x^6 + 3$

(2) $x^{67} + x^{53} + x^{43} + x^{29} + x^{24} + x^{18} + x^6 + 3$

(F). **Given:** $x + \frac{1}{x} = -\sqrt{3}$

Conclusion: (a) $x^6 = -1$

(b) if the difference of power of two term of x is 6 then sum of both term will be zero.

e.g. $x^{18} + x^{12} = 0, x^{20} + x^{14} = 0$

BASIC IDENTITY

1. $(a + b)^2 = a^2 + 2ab + b^2$
2. $(a - b)^2 = a^2 - 2ab + b^2$
3. $a^2 - b^2 = (a + b)(a - b)$
4. $(a + b)^3 = a^3 + b^3 + 3ab(a + b)$
5. $(a - b)^3 = a^3 - b^3 - 3ab(a - b)$
6. $a^3 + b^3 = (a + b)(a^2 + b^2 - ab)$
7. $a^3 - b^3 = (a - b)(a^2 + b^2 + ab)$
8. $(a + b + c)^2 = a^2 + b^2 + c^2 + 2(ab + bc + ca)$
9. $(a + b + c)^3 = a^3 + b^3 + c^3 + 3(a + b)(b + c)(c + a)$

Type – 3

Think that if $x + y = 0$ then either x or y should be negative but if $x^2 + y^2 = 0$ then both x & y should be zero because neither x nor y can be negative.

So, if **Given** : $x^2 + y^2 + z^2 = 0$ then

Conclusion : $x = y = z = 0$

Or

Given : $(x - a)^2 + (y - b)^2 + (z - c)^2 = 0$ then

Conclusion : $x = a, y = b$ & $z = c$

If $(x-4)^2+(y-3)^2+(z+5)^2=0$ then $\frac{x^2}{8} + \frac{y^2}{18} + \frac{z^2}{50} = ?$

a)4

b) $3\frac{1}{6}$

c) $4\frac{1}{5}$

d)3

If $(a-2)^2 + (b-3)^2 + (c-11)^2 = 0$ find $\sqrt{a+b+c} = ?$

(i) 4

(ii) -4

(iii) ± 4

(iv) 16

If $a^2 + b^2 + c^2 + 96 = 8(a + b - 2c)$, then $\sqrt{ab - bc + ca}$ is equal to:

यदि $a^2 + b^2 + c^2 + 96 = 8(a + b - 2c)$, तो $\sqrt{ab - bc + ca}$ बराबर है :

(a) $2\sqrt{3}$

(b) 4

(c) 6

(d) $2\sqrt{2}$

01:00

If $(a+b-c-3)^2+(b+c-a-8)^2+(c+a-b-5)^2=0$, then $\sqrt{(a+b+c)}=?$

a) $2\sqrt{2}$

b) 3

c) 4

d) $\sqrt{2}$

01:00

Type – 4

(A).Formula: $a^2 + b^2 + c^2 - ab - bc - ca$

$$= \frac{1}{2} [(a-b)^2 + (b-c)^2 + (c-a)^2]$$

If $a=97.5$, $b=100$, $c=102.5$, then find $a^2 + b^2 + c^2 - ab - bc - ca = ?$

a) $\frac{81}{4}$

b) $\frac{70}{4}$

c) $\frac{75}{4}$

d) 15

01:00



$$\begin{aligned} \text{(A). Formula: } & a^3 + b^3 + c^3 - 3abc \\ &= (a + b + c) (a^2 + b^2 + c^2 - ab - bc - ca) \\ &= \frac{1}{2} (a + b + c) [(a - b)^2 + (b - c)^2 + (c - a)^2] \end{aligned}$$



If $a=299$, $b=298$, $c=297$ then the value of $2a^3 + 2b^3 + 2c^3 - 6abc = ?$

a)5154

b)5267

c)5364

d)5456

01:00