



SSC GD CONSTABLE 2023



सफलता का महामंत्र DAY-12

Algebra

बीजगणित

MATHS

LIVE 05:00 PM 





$$1 - X + \frac{1}{X} = 3, \quad X^2 + \frac{1}{X^2} = ?$$

a.7

b.6

c.9

d.8



$$2 - X + \frac{1}{X} = 4, \quad X^2 + \frac{1}{X^2} = ?$$

a.14

b.16

c.32

d.18



$$3 - X + \frac{1}{X} = 3, \quad X^3 + \frac{1}{X^3} = ?$$

- a. 18
- b. 27
- c. 24
- d. 36



$$4 - x^5 + \frac{1}{x^5} = ?, \text{ if } x + \frac{1}{x} = 4$$

- a. 724
- b. 814
- c. 742
- d. not



$$5 - x^2 + \frac{1}{x^2} = 34, \text{ if } x + \frac{1}{x} = ?$$

a. 4

b. 5

c. 6

d. 2



$$6 - x^2 + \frac{1}{x^2} = 47, \text{ if } x + \frac{1}{x} = ?$$

- a. 4
- b. 5
- c. 6
- d. 7



$$7 - x^2 + \frac{1}{x^2} = 34, \quad x - \frac{1}{x} = ?$$

a. $4\sqrt{2}$

b. 4

c. 8

d. $6\sqrt{2}$



$$8 - X^2 + \frac{1}{X^2} = 34, \quad X^2 - \frac{1}{X^2} = ?$$

a. $24\sqrt{2}$

b. 24

c. 28

d. $36\sqrt{2}$



9- $x^4 + \frac{1}{x^4} = 14, x^2 + \frac{1}{x^2} = ?$

- a. 4
- b. 16
- c. 6
- d. 4



10. If $x^{\frac{1}{4}} + \frac{1}{x^{\frac{1}{4}}} = 7$, $x + \frac{1}{x} = ?$

a.87

b.47

c.37

d.27



11. $x + \frac{1}{x} = \sqrt{3}$, $x^6 = ?$

a.-1

b.1

c.2

d.-2



12. $x + \frac{1}{x} = 1$, $x^3 = ?$

a.-1

b.1

c.3

d.0



13. $x + \frac{1}{x} = -1$, $x^3 = ?$

a.1

b.-1

c.0

d.2



15. If $x - \frac{1}{x} = 2$, find the value of $x^4 - \frac{1}{x^4}$

a. $24\sqrt{2}$

b. $28\sqrt{2}$

c. $22\sqrt{2}$

d. $2\sqrt{2}$



16. If $x^2 + \frac{1}{x^2} = 6$, find the value of $x^3 - \frac{1}{x^3}$

a. 14

b. 16

c. 18

d. 20



17. If $\frac{P}{q} - \frac{q}{p} = 4$, find the value of $\frac{P^3}{q^3} + \frac{q^3}{p^3}$

- a. $34\sqrt{5}$
- b. $30\sqrt{5}$
- c. 30
- d. 24



.If $x = \sqrt{\frac{\sqrt{5}+1}{\sqrt{5}-1}}$ then the value of $5x^2 - 5x - 1$ will be:

- a. 0
- b. 3
- c. 4
- d. 5



1. If $x + \frac{1}{x} = \sqrt{3}$, then the value of $x^{208} + x^{202}$ will be

- a. 0
- b. 1
- c. $\sqrt{3}$
- d. $-\sqrt{3}$



If $x=11+6\sqrt{2}$, then find the value of \sqrt{x}

a. $2 + \sqrt{3}$

b. $3 - \sqrt{2}$

c. $1 + \sqrt{2}$

d. $2 - \sqrt{3}$



If $x=7+4\sqrt{3}$, then find the value of \sqrt{x}

a. $2 + \sqrt{3}$

b. $2 - \sqrt{3}$

c. 0

d. 1



If $x = \frac{\sqrt{3}}{2}$, then find the value of $\sqrt{1+x}$.

a. $\frac{\sqrt{3}}{2} + \frac{1}{2}$

b. $\frac{\sqrt{3}-1}{2}$

c. $2 - \sqrt{3}$

d. $2 + \sqrt{3}$



If $x^{\frac{1}{4}} + \frac{1}{x^{\frac{1}{4}}} = 1$, then find the value of $x^{1024} + \frac{1}{x^{1024}}$

- a. 0
- b. -1
- c. 1
- d. 2



If $a^3 + b^3 + c^3 - 3abc = 0$ and $a + b + c \neq 0$ find $a + b + c$.

a. $a = b = c$

b. $a +$

$b = c$

c. $a +$

$c = b$



If $a=997$, $b=998$ and $c=999$, $a^3+b^3+ c^3-3abc$
=?

- a. 0
- b. 8982
- c. 1
- d. 4491



If $x=3+2\sqrt{2}$ and $xy=1$, then find the value of $\frac{x^3+3xy+y^3}{x^2-2xy+y^2}$

- a. $\frac{209}{11}$
- b. $\frac{209}{37}$
- c. $\frac{205}{37}$
- d. $\frac{201}{32}$



If $x^{1/3} + y^{1/3} = z^{1/3}$

Find the value $(x+y-z)^3 + 27xyz$

a. 1

b. 0

c. 2

d. -1



If $a=25$, $b=15$ and $c= -10$, $a^3+b^3+ c^3-3abc/(a-b)$
 $+(b-c)^2 +(c-a)^2$

- a. 15
- b. 10
- c. 1
- d. 0



If $x=16$, find the value of $x^4-17x^3+17x^2-17x+17$

- a. 0
- b. -1
- c. 2
- d. 1



If $\frac{a}{1-a} + \frac{b}{1-b} + \frac{c}{1-c} = 1$, then find value of $\frac{1}{1-a} + \frac{1}{1-b} + \frac{1}{1-c}$

- a. 0
- b. -1
- c. 4
- d. 2



if $x = \frac{\sqrt{3} + 1}{\sqrt{3} - 1}$

And $xy = 1$ then find the value of $\left(\frac{x-y}{x+y}\right)^2$

a. $3/7$

b. $3/4$

c. 0

d. 1