



Mahendra's



SSC CGL/CPO/CHSL

MATHS

ALGEBRA

(बीजगणित)

PART-1

Most Asked Questions By SSC

LIVE

06:30 PM



Staff Selection Commission**Important Notice**

The Commission has scheduled to conduct following examinations in the months of April, May and June 2022 as per the given schedule:

S No	Name of Examination	Paper/ Stage	Schedule of Examination
1.	Combined Graduate Level Examination, 2021	Tier-I	11.04.2022 to 21.04.2022
2.	Combined Higher Secondary (10+2) Level Examination, 2021	Tier-I	24.05.2022 to 10.06.2022

2. The above schedule is subject to the prevailing conditions and Government guidelines issued from time to time regarding handling of the Covid-19 pandemic.

3. The candidates are advised to visit the website of the Commission at regular intervals for further updates.



Chhavi Saxena 21 hours ago

Home work answer is option B (C's share is 4800 Rs)

Very Nice Session Sir , Thank You So Much Sir 🏆🏆🏆🏆🏆

👍 🗨️ REPLY

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Diksha Sharma 8 hours ago

4800 ans Sir m apki class live nhi kr pati pr baad m jarur dekhti hu ap bahut accha padate h

👍 1 🗨️ REPLY



T@nu... 😊 17 hours ago

Option - b
(4800) is the rgt answer

👍 🗨️ REPLY

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Anjali Kushwaha 8 hours ago

4800 is right answer sir

👍 🗨️ REPLY



Rishabh Dev Chaturvedi 21 hours ago

A ka profit 3600

B. ka profit. 6000

C. ka profit. 4800

👍 🗨️ REPLY

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Soumen Sinha 21 hours ago

Answer 4800 ✓

👍 🗨️ REPLY

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ARNAB DEBROY 21 hours ago

b)4800

👍 🗨️ REPLY

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Prashant Rajput 21 hours ago

H.W. 4800 🏆

👍 🗨️ REPLY





Janardhana Gupta 17 hours ago
4800 Home work question ka answer

  **REPLY**

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Rishabh Dev Chaturvedi 21 hours ago
👉 sir right ans. 4800

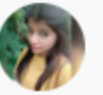
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Tanu Vishwakarma 20 hours ago
4800

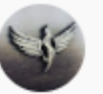
  **REPLY**




Muskan Raj 21 hours ago
4800

  **REPLY**

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creative sg 21 hours ago
4800

  **REPLY**





Nakul Dhiman 10 hours ago
Sir 4800 hoga

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MONOJIT 21 hours ago
Rs. 4800/-

  **REPLY**

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AYAN PRAMANIK 21 hours ago (edited)
4800

  **REPLY**

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Ankit Kumar 21 hours ago
4800

  **REPLY**



Algebra

Polynomial Quadratic Equation Basic Identity

Expression:– Relation between variable

$$\text{ex: } y = x + z^2 + w^2$$

where y, x, z, w are variable and x, z, w are independent variable while y is dependent variable because value of y is depending upon value of x, z, w .

POLYNOMIAL

It is an expression having single variable and power of variable must be a positive interger.

Ex. 1 Which one of the following is polynomial?

(i) $x^3 + y^2$

(ii) $x^2 + \frac{1}{x^2}$

(iii) $x + \sqrt{x}$



(iv) $x^3 + x^2 + x$

01:00

Degree of Polynomial:-

Maximum power of variable is called degree.

Ex. 2 (i) $x^4 + x^3 + x^2$
degree = 4

(ii) $x^2 + x^3 + 1$
degree = 3

Types of Polynomial :-

1. Linear Polynomial

\Rightarrow degree = 1 (e.g. $x + 1, 3x + 2$)

2. Quadratic Polynomial

\Rightarrow degree = 2 (e.g. $x^2 + x + 1, x^2 + 3$)

3. Cubic Polynomial

\Rightarrow degree = 3 (e.g. $x^3 + x^2 + 1, x^3 + 8$)

Factor Theorem:–

If $(x - a)$ is factor of $f(x)$, then $f(a) = 0$.

For ex. Is $x - 1$ factor of $x^2 - 2x + 1$?

Step I : put factor = 0.

$$x - 1 = 0 \text{ then } x = 1$$


Step II : Put value of x in function

$$\text{Put } x = 1 \text{ in } x^2 - 2x + 1$$

$$(1)^2 - 2 \times 1 + 1 = 1 - 2 + 1 = 0$$

hence $x - 1$ is factor of $x^2 - 2x + 1$

Factor of $x^{29} - x^{26} - x^{23} + 1$.


- (a) $(x - 1)$ but not $(x + 1)$
- (b) $(x + 1)$ but not $(x - 1)$
-  (c) both $(x + 1)$ and $(x - 1)$
- (d) Neither $(x + 1)$ nor $(x - 1)$

01:00



If $x^3 + ax^2 + 2x + 3$ is exactly divisible by $(x + 1)$. Find the value of a .

(a) 1

 (b) 0

(c) 5

(d) 4

01:00

If $(x + 1)$ and $(x - 1)$ are factor of $ax^3 + bx^2 + 3x + 5$. Find the value of a and b .

यदि $(x + 1)$ और $(x - 1)$, $ax^3 + bx^2 + 3x + 5$ के गुणनखंड हैं। a और b का मान ज्ञात कीजिए।

(a) 2,3

(b) 5,3

→ (c) -3,-5

(d) 3, 5

01:00

Remainder Theorem:-

If $f(x)$ is divided by $(x - a)$, then

$$\text{Remainder}(R) = f(a)$$

Step 1. divisor = 0

$$x - a = 0$$

Step 2. put $x = a$ in function

$$\text{then remainder}(R) = f(a)$$

If $x^2-7x+15$ is divided by $(x-3)$, find the remainder?

यदि $x^2-7x+15$ को $(x-3)$ से भाग लगाने पर शेषफल ज्ञात कीजिये ?

(a) 27

(b) 20


→ (c) 45

(d) 36

01:00

If $x + \frac{1}{x} = 2$, then $\left(x^2 + \frac{1}{x^2}\right) \left(x^3 + \frac{1}{x^3}\right) = ?$

01:00

- (a) 6
-  (b) 4
- (c) 8
- (d) 2

If $m + \frac{1}{m-3} = 5$, then $(m - 3)^2 + \frac{1}{(m-3)^2} = ?$

01:00

- ➔ (a) 2
(b) 0
(c) -2
(d) 15

If $a + \frac{1}{a-4} = 6$, then $(a - 3)^7 + \frac{1}{(a-7)^3} = ?$

01:00

(a) $63\frac{7}{8}$

(b) $255\frac{1}{8}$

→ (c) $127\frac{7}{8}$

(d) 216

If $x + \frac{1}{x} = -2$, then $x^{2n+1} + \frac{1}{x^{2n+4}} = ?$

01:00

(a) 2


(b) 4

(c) -2

→ (d) 0

If $3x + \frac{1}{3x} + 2 = 0$, then $243x^7 + \frac{1}{81x^2} = ?$

01:00

- (a) 2
- (b) 4
-  (c) 0
- (d) 1

If $\frac{x}{5} + \frac{5}{x} = -2$, then what is the value of x^3 ?

01:00

a)-125

b)-25

→ c)1/125

d)625

If $x + \frac{1}{x} = 1$, then $(1+x+x^2)(1-x-x^2) = ?$

01:00

- (a) 0
- (b) 4
- (c) -2
- (d) 1

(C). Given: $x + \frac{1}{x} = 1$

Conclusion: (a) $x^3 = -1$

(b) if the difference of power of two term of x is 3
then sum of both term will be zero.

e.g. $x^{12} + x^9 = 0, x^{10} + x^7 = 0$



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

(i) $x^{78} + \frac{1}{x^{78}} = ?$

01:00

(ii) $x^{55} + \frac{1}{x^{55}} = ?$



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

(iii) $x^{50} + \frac{1}{x^{50}} = ?$

(iv) $x^{71} + \frac{1}{x^{71}} = ?$

01:00

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

01:00

$$x^{203} + x^{200} + x^{188} + x^{185} + x^{140} + x^{137} + x^{102} + x^{99} + x^{100} + x^{98} = ?$$