UDAAN

2025

Polynomials

Mathematics | Lecture - 01

By – Ritik Sir

Topics

1. Basics
2. Types of Polynomial
3. General Forms of Polynomial
4. Degree of a Polynomial
5. Value of a Polynomial
6. Zeroes of a Polynomial

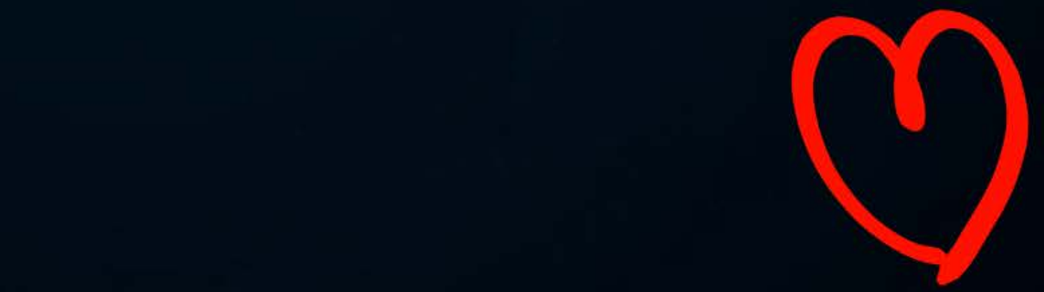
Is class main mic issue aaya Bahut. Maaf kaadena

to

Next class

Mic issue key liye sooy doston!

Milte hain Next class main!



Varsha ■ 9 hours ago Report

sir mere class ke sare bache Rs Aggarwal banatey hai or teacher bhi question rs Aggarwal se karatey hai sir mere ncert ke alawa koe book nhi hai sir mujhe samajh nhi aa raha mai kya karu sir mai maths me bahut weak hu

2 likes

Snehita Pusya ■ 3 hours ago Report

hello sir, I am Snehita and after learning from you I feel lucky to be able to join these classes and receive knowledge from great teachers like thank you for doing hardwork for teaching us.

2 likes

Shristi karn ■ 4 hours ago Report

sir i am following your lecture from class 8th i failed class 6th and not got gud marks in class 7th but in class 8th i got 85 in maths and in 9th 92

Sakshi Priya ■ 4 hours ago Report

you are the besttt sir❤️... your way of teaching is amazing..... nowadays i can solve any questions given by my teachers in tution and school🧿💕

1 like

Anaya Verma ■ 4 hours ago

80/30 hi aay the sir maths me bhot hi jyada weak hu school k teachers tane marte h ki weak hu maths me 80/75 score krna hai

sir ji jab aap question dete hai too kuch samajh nahi aata hai sir ji mere das jage dhayan jata hai or me tension mein rahata hu lagta hai ke me kuch kar lu 😔 sir ji me aapse kabhi jhoot nahi bolna chahta hu ke me 9th me fail ho chuka hu mujhe Ghar se tana milta hai or to or school ke teacher bhi bolate han ki Jo 9th me pass nahi hua oo 10th me kya pass ho ga but mujhe 90 percentage Lana hai sir ji please help me aap mere Bhagwan ho 😔💔💔

8 likes

Shaheen Fatima ■ 49 minutes ago Report

My name is shaheen
1st chapter aapse padhne par ab kaafi. easy lag raha h par 8th may se mera test h aur school mein padhaya hua bilkul bhi samajh nahin aaya h
Aur sir mera aik aur question h ki RD sharma aur RS aggarwal kaun better h aur ise kaise solve kare kyonki aage mujhe PCM persue karna h.

1 like

Ayesha Mujawar ■ 4 hours ago

Good Morning sir,
Myself Ayesha,
I am very week in maths...!!!
i want to score 75+/80 in maths...
I understand all the concepts you taught in ch1 clearly thank you sir
hope you will help me in achieving good marks
i really believe sir!!!!!!

Dipansh Jatav ■ 46 minutes ago Report

sir jab Mai 1 to 9 class 50 percent se jyada nahi la paya but jabse AAP aur sabhi teachers se study kar Raha hu tabse mujhe lag raha hai ki mai 95+ percent la sakta hu I proud of you all teachers

5 likes

sir i am fail in maths in class 9. but you motivated me i confident to score 95/100 thank you sir .

4 likes

Mayank ■ [illegible] hours ago Report

Sir lecture to sare dekhliye hai , and samaj me bhi aagye but notes kaise banaye MATHS ke ?

3 likes


WORK HARD
DREAM BIG
NEVER GIVE UP !!

Constants and Variables

Numbers!

2, -2, π, 3.14, 2.185, 100, $-\frac{5}{2}$

Variable

vary

change.

x, y, z, P, q, θ ...

Terms

0 is not a term

The non zero part of an algebraic expression separated by + or – sign are called the terms.

Terms

- Constant: $2, -3, \frac{5}{2}$
- Variable: x, y, z, p.
- Constant / variable. (multiplication.): $2x, -3x, -3x^2, -3xyz$

Algebraic Expression

(Algebra)

Collection of terms.

→ $2 + x$ → $x^3 + y^{1/3} + \sqrt{x} + 9x^2$ XXX

→ $2x^2 - 3x + 2$

→ $y + x + z + 3x$

Polynomial → A.E → Variable ka exponent → whole no. (non-negative integers)

many — terms.

Degree of Polynomial

highest exponent of the variable

$\longrightarrow$ $x^3 - 2x^2 + 4x + 2$ → d=3

$\longrightarrow$ $\sqrt{x} + y^3 + y^2 - 2x^3 + 3xy$ → not a polynomial

Types of polynomials

Number of terms in a polynomials

$2x^3 - 2x^2 + 4x^3 = 6x^3 - 2x^2$

1. **Monomial:** A polynomial containing one term is called a monomial. ('Mono' means 'one'.)
   Example : 9, –14, 6x, $-8x^2$, $5x^3$, $2x^4$, etc. are all monomials.

2. **Binomials:** A polynomial containing two non zero terms is called a binomial. ('Bi' means 'two'.)
   Example : $(9 + 4x)$, $(x - 3x^2)$, $(8 + x^3)$, $(-x^4 + 7)$ are all binomials.

3. **Trinomials:** A polynomial containing three non zero terms is called a trinomial. ('Tri' means 'Three'.)
   Example : $(x^2 + 2x - 3)$, $(2x^3 + 5x^2 - 4)$, $(-7x^4 + 5x^2 + 6)$, $(5x^6 - 3x^4 + x)$ are all trinomials.

On the Basis of Degree

#imp

1. ***Linear Polynomial:*** A polynomial of degree 1 is called a linear polynomial.

$x+1,\ 2x-1,\ 2y+2,\ 3x$ ... $d=1$

2. ***Quadratic Polynomial:*** A polynomial of degree 2 is called a Quadratic polynomial.

$2x^2-3x+2,\ -3x^2,\ -3x^2+4$ ... .

3. ***Cubic Polynomial:*** A polynomial of degree 3 is called a Cubic polynomial.

$x^3,\ -2x^3,\ -2x^3+3x^2+4x+2,\ -5x^3+\frac{1}{2}$ ... $d=4$

4. ***Biquadratic Polynomial:*** A polynomial of degree 4 is called a Biquadratic polynomial.

Quartic

Constant Polynomial → $2x^0, -3x^0, -4x^0, \frac{5}{2}x^0, 100x^0$

non-zero

$d = 0$

Zero Polynomial → $0x^0, 0x^1, 0x^2, 0x^3, 0x^4, 0x^5, 0x^6, 0x^{100000} \ldots$

d = not defined

Topic : Basics

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

#Q. Which of the following expression are polynomials? In case of a polynomial write its degree?

(i) $x^3 - 5x + 2$ → d = 3

(ii) $y^2 + \sqrt{2}y - \sqrt{5}$ → d = 2

(iii) $2\sqrt{x} + 7$ ✗

(iv) -6 → constant p. d = 0

(v) $4t^2 + \frac{1}{6}t + 2\sqrt{3}$ → d = 2

(vi) $z^2 + \frac{5}{z^2} + 1 \rightarrow z^2 + 5z^{-2} + 1$ ✗

(vii) $1 - \sqrt{5}x$ → d = 1

(viii) $\frac{6\sqrt{x} + x^{3/2}}{\sqrt{x}}$

$\frac{a^m}{a^n} = a^{m-n}$

$= \frac{6\sqrt{x}}{\sqrt{x}} + \frac{x^{3/2}}{\sqrt{x}}$

$= 6 + \frac{x^{3/2}}{x^{1/2}}$

$= 6 + x^{\frac{3}{2}-\frac{1}{2}}$

$= 6 + x^1$ → d = 1

General Form of Polynomials

Ball → shape...

Topic : Basics

#Q. (i) Give an example of a monomial of degree 5.

(ii) Give an example of a binomial of degree 8.

(iii) Give an example of a trinomial of degree 4.

(iv) Give an example of a monomial of degree 0.

H.W

THANK YOU

Next week → 3 classes

M, W, F

2^5
2^3 = 2^{8-3}