



Introduction to Maxima minima volume 1

LESSON 1 OF 1



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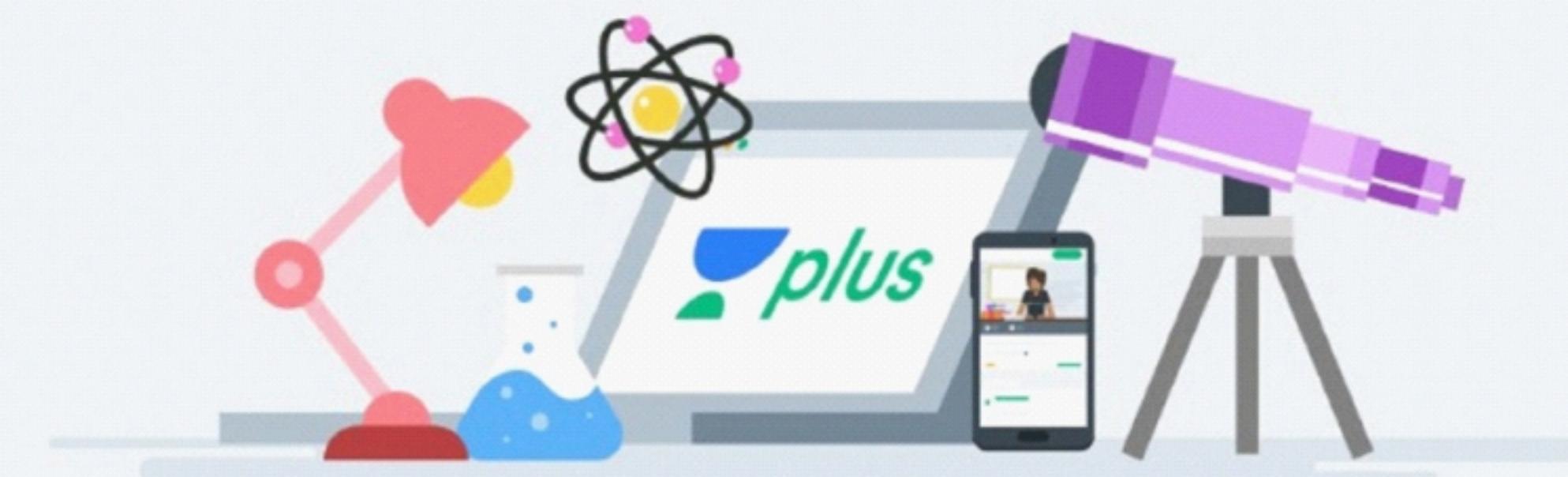
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Manoj Chauhan
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Application of Derivative- Maxima & Minima

JEE Advanced

Success Mantra
KEEP Thinking
(Problems only :D)

Prepared By :
Manoj Chauhan
IIT Delhi



About Me

- **Star Educator (Maths), Unacademy.**
- **Ex Sr. faculty at Vibrant Classes (Kota)** **(2013-2018)**
- **Online Maths faculty at Etoos India.** **(2011-2013)**
- **Ex Sr. faculty at Bansal Classes (Kota)** **(2008-2011)**
- **Ex Sr. faculty at Career Point (Kota)** **(2007-2008)**
- **B.Tech, IIT Delhi** **(2003-2007)**
- **Teaching Experience of more than 11.5 years.**

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Already taught on Unacademy

- **Functions, IITJEE, Limits, Continuity, Differentiability, Methods of Differentiation, Indefinite Integration, Definite Integration, Tangent and Normal, Monotonicity.**
- **Theory, Solved Examples, Illustrations, Problems (Easy, Medium, Difficult) Previous Year Questions of the Last 40 years.**

What's on Unacademy Plus by Manoj Chauhan Sir ???

➤ Live Courses going on Unacademy

- **Complete Calculus**
- **EVOLVE : Complete course for Class XIIth**

Unit 1 - Functions

Start Date : 10th May.

- **EMERGE : Complete course for Class XIth**

Unit 1 - Fundamental of Mathematics

Start Date : 13th May.

Upcoming Courses

- **EVOLVE : Complete course for Class XIIth**

Unit 2 - Inverse Trigonometric Functions, Determinants

Start Date : 3rd June.

- **EMERGE : Complete course for Class XIth**

Unit 2 - Compound Angles, Trigonometric Equations

Start Date : 5th June.

- **Complete course for Class XIIIth**

Unit 1 - Trigonometry, Quadratic Equations, Sequence Series

Start Date : 3rd June.

- **Complete course for Class Xth**

Unit 1 - Polynomials, Linear Equations in Two Variables

Start Date : 3rd June.

What should be the Student's Strategy ?

- ❖ **Revise** what has been done in the previous lectures.
- ❖ **Writing Notes.** Making notes while the lecture is an important task. Don't just listen to the video. Write each and everything. Keep pen and paper ready.
- ❖ **Pause the video** according to your speed. And learning ability.
- ❖ **Draw graphs** timely.
- ❖ **Try to solve** before I solve.
- ❖ **Follow** the courses regularly.
- ❖ **Practice Assignments.**

Important Features of My Lectures

- ❖ **More than one approach** to solve.
- ❖ **Well laid out plan.**
- ❖ **Complete discussion** of each and every topic.
- ❖ All types of questions covered :
Easy, Medium, Difficult, Super Difficult.
- ❖ **Previous year problems** of the last 40 years discussed.
- ❖ Target is **IIT Advanced**, also helps you in all the **Engineering entrance exams** as well as for boards.
- ❖ Making Maths **interesting and entertaining.**

Testimonials



Aman Bhargava • about 3h ago

Sir! A question of type $f(a+b)=f(a)f(b)$ came directly from your notes 9th April morning shift! You are great



...



dhaval5611 Best maths teacher i have got im one of your virtual student



10w 1 like Reply



crati_avi And a similar problem regarding even and odd function, which you taught us in vibrant came in yesterday's Evening shift.



1w 2 likes Reply



Saurav Choudhary

reviewed on April 18, 2019

The best teacher in INDIA, believe me I know him from around 1 year, if anyone of you don't know him ask about him in Kota, then u will come to know that you are blessed that u r learning from such a superb teacher. thank you again for such a wonderful course



Dedications

Brown Hat
Dedicated at 10k minutes

Zaira Sheikh
Dedicated on 4 Apr 2019

*"Sir. You are next level maths teacher.
Your way of teaching is so simple and humorous that none could be bored.
Your way of teaching literally made Maths my Favourite subject.
You not only teach. ❤"*

A BLUE HAT HAS BEEN
DEDICATED TO YOU!

Dedicated to Manoj Chauhan

"Sir you are great math tutor.. aapke function vol me se 2ques. Mains me aaye the aap bhut ache teacher hai. Next bar jee2020 bhi aap kuch ques bta dijye jisse bihar ke bchhe mains nikal payenge."

by Shubham Rangrajan



vijay jain 3 weeks ago

Thank you sir ,sir plz upload other videos lecture of class 12 and 11



REPLY

T

Tarsem Kumar • about 2h ago



I don't have words for the work of this teacher. He is fabulous teacher and doing a very good job for student who can't afford coaching and all. Personally i am in a coaching institute but for math i only follow sir and his instruction. Thank you so much sir

0



om_roy18 Sir u r great.... U r my inspiration..



1w 1 like



_1nt3ns3le0_007_ Sir I have your Etoos videos sir.. you are really great... Apke videos dekhe tho maths asan hogaya... Please bless me sir.. aap mahan ho sir



1w 1 like



Akshay s 2 weeks ago

Mc sir ki jai ho!! Bangalore aakash fans sir

6

View 4 replies ▾



suryasingh885 ☺☺Tbh sir you are a self institution ❤️❤️and i like these words specially you keep on repeating "theek hai sab" ☺

3w 3 likes



mattstonie36 Yes sir you teach fabulous and keep up the great work

3w 1 like



agniveshpandita Sir I feel confident in maths because of ur motivation.. thank u sir....

3w 1 like



SHIBU 1 week ago

Best teacher I've ever encountered ☺

7



aryan raj 5 days ago

Upload more video on mc sir

3



Dr. Arshad Ali : Teacher & Motivational Speaker 6 days ago

You are best teacher.

3



Chaitanya Gadekar 1 week ago

Sir Ur Awesomeeee

2



Anand Malviya 2 weeks ago

sir literally you are the best and the most famous mathematics teacher of india...



Kritika kumari 3 weeks ago (edited)

♥ Tysm sir you're best this is not the best this is the bestest approach ♥

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- ❖ Introduction to Maxima and Minima
- ❖ Method of Finding extrema of continuous functions
 - (a) First Derivative Test
 - (b) Second Derivative Test
- ❖ Concept of Global Maximum/Minimum
- ❖ Maximum and Minimum in Discontinuous Function
- ❖ Application of Maxima and Minima
- ❖ Drawing the graph of Rational Function
- ❖ Geometrical Applications
- ❖ Optimization
- ❖ Shortest distance between two curves or curve and a line or curve and a point.
- ❖ Polar coordinates
- ❖ Determining Nature of Roots of Cubic Polynomial
- ❖ Significance of the sign of 2nd order derivative and points of inflection.