

CLASS 12

MATHEMATICS

REVISION NOTES

Class 12 Mathematics Chapter 5 Continuity and Differentiability – Revision Notes

Quick revision notes for Class 12 Maths Chapter 5 (Continuity and Differentiability). These Class 12 Mathematics Chapter 5 notes are ideal for quick revision just before exams.

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Quick revision notes for Class 12 Maths Chapter 5 (Continuity and Differentiability). These Class 12 Mathematics Chapter 5 notes are ideal for quick revision just before exams.

Continuity

f continuous at a : $\text{LHL} = \text{RHL} = f(a)$.

Differentiability $\Rightarrow$ continuity (not vice versa).

Differentiation Rules

Chain rule: $[f(g(x))]' = f'(g(x))g'(x)$.

Implicit differentiation: differentiate both sides w.r.t. x , solve for dy/dx .

$d/dx(e^x) = e^x$; $d/dx(\log x) = 1/x$.

Logarithmic differentiation for $[f(x)]^{g(x)}$.

Theorems

Rolle's Theorem: $f(a) = f(b) \Rightarrow \exists c$ with $f'(c) = 0$.

Mean Value Theorem: $f'(c) = [f(b) - f(a)]/(b - a)$.

One-Line Summary

Continuity requires matching limits and function value; differentiability is a stronger condition implying continuity, governed by chain/implicit/logarithmic differentiation rules and mean value theorems.

Class 12 Mathematics Chapter 5 – Solutions and Important Questions

Need full answers or more practice? See the [Class 12 Mathematics Chapter 5 Solutions](#) and [Class 12 Mathematics Chapter 5 Extra Questions](#).

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