

Virtual Class








Date : 07-02-2018

Incharge of Mathematics Department Smt. K.V.Naga Lakshmi has taught through **Virtual Class** on "**Differentiation in Real Analysis**" on 07-02-2018 to IInd B.Sc. Mathematics Students.

V.S.R. Government Degree & P.G. College, Movva Students and Staff interacted through **Virtual Class** programme.

In this topic she covered Differentiation, Right hand Derivatives and Left hand Derivatives, Problems on Differentiation, Lagrange's Mean value theorem, Cauchy Mean Value theorem, Rolle's theorem and applications on the above theorems.

Signature of the Staff Members :

1. K.V.Naga Lakshmi 
2. K. Bhanu Prasad 
3. M. Lakshman desu 
4. K.V. Rama Rao. 
5. SK. Palveen 
6. D.Swasma Femari 
7. N. Srinivas 


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Problem: If $f: \mathbb{R} \rightarrow \mathbb{R}$ is defined as $f(x) = x^2$, then show that f is derivable at $x \in \mathbb{R}$ and $f'(x) = 2x$

Sol: $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$

$$= \lim_{h \rightarrow 0} \frac{(x+h)^2 - (x)^2}{h}$$
$$= \lim_{h \rightarrow 0} \frac{(x+h)^2 - (x)^2}{(x+h) - x}$$
$$= 2x$$

at x and $f'(x) = 2x$.

