

Name: Aftab Shehzad

ID: 16138

Section - A

Applied Calculus

Assignment: 1

Application of derivatives

⇒ We use ~~det~~ derivative to determine the maximum and minimum values of particular function (e.g. cost, amount, strength etc)

⇒ It is used ~~in~~ when the modeling behaviour of moving objects.

⇒ Used for Radius of Curvature.

⇒ Concavity and inflection points.

⇒ Critical points

- ⇒ Used for Approximation.
- ⇒ Rate of change of quantities.
- ⇒ Derivative is also used in Automobile Engineering.
- ⇒ Derivative is used to calculate rate of reaction and Compressibility.
- ⇒ Derivative is also used in Curve Sketching.
- ⇒ It is also used in the design and maintenance of roads, bridges, railway, airports etc.

Applications of Integration

- ⇒ An Architect Engineer use integration to determine amount of material to construct Curved Shape Construction.
- ⇒ In Electrical Engineering integration is used to determine the exact length of power cable needed to connect Sub-Station.
- ⇒ Space flight Engineers frequently use ~~calculates~~ integration when planning for long mission.
- ⇒ Integration is used to calculate the center of mass.
- ⇒ Used for center of gravity.
- ⇒ Moment of inertia of a sports vehicle.
- ⇒ In Mechanical engineering its is used in different types of machine while using it.

Assignment No: _____

اسائنمنٹ نمبر _____

⇒ Area between curves.

⇒ Average value of a function.

⇒ Used for finding Surface area.