Collision Properties :-

(i) Mean free Path :→ The mean distance produced by molecules between two Successive Collision. is called The mean free path.

It is denoted by λ. if l_1, l_2, l_3 and so on are the free path for a molecule of a given gas. Then it's mean free path is

$$\lambda = \frac{l_1 + l_2 + l_3 + \cdots}{n}$$

where n = Number of molecule with which The molecule Collide.

Mean free path is related to Co-efficient of viscosity of The gas as

$$\lambda = \eta \sqrt{\frac{3}{Pd}}$$

where η = Co-efficient of viscosity.

P = Pressure of gas

d = Density of gas.

So Mean free path is inversely Proportional to Pressure-root keeping η and d are Constant.