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Collision number

The number of molecules with which a single molecule will collide per unit time per unit volume of the gas is called collision number.

Collision number is given by

$$z_1 = \sqrt{2} \pi \sigma^2 \bar{c} P$$

where, z_1 = Collision no.

σ = Diameter of molecule

\bar{c} = Average velocity

P = NO. of molecules per unit volume
of the gas.

