Equilibrium of a Particle in 2-D

$$\vec{R} = 0$$

$$(\Sigma F_x)\vec{i} + (\Sigma F_y)\vec{j} = 0$$

$$\Sigma F_x = 0 \quad (1)$$

$$\Sigma F_y = 0 \quad (2)$$

* Newtons First Law (?!)

* no dimensions
* dimensions not important
* "small" body

etc.

but: If all forces meet at one point then it can be considered as Particle

For now consider 2-D only

forces on coplanar

latter consider 3-D.