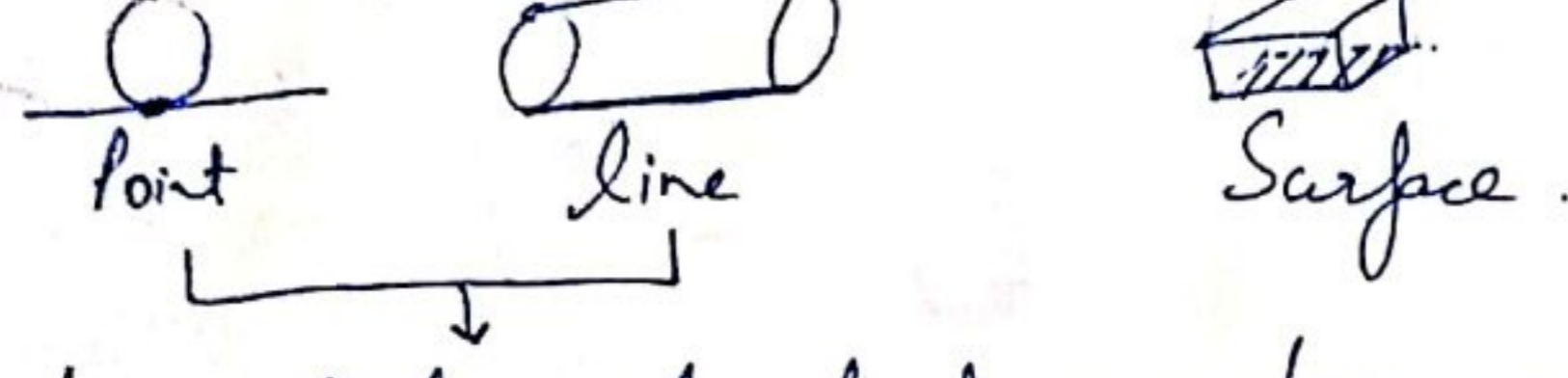


Rolling Contact Bearing.

→ Rolling Contact (2D Circle (Rolling), 3D Cylinder (Line).
(3D Surface Contact).



Less contact \Rightarrow less heat generation \rightarrow Run at high Speed. (But noisy).
 because less μ

$H_f \propto (\mu)$ (Heat generation) \Rightarrow anti-friction bearing.

Rolling Bearing

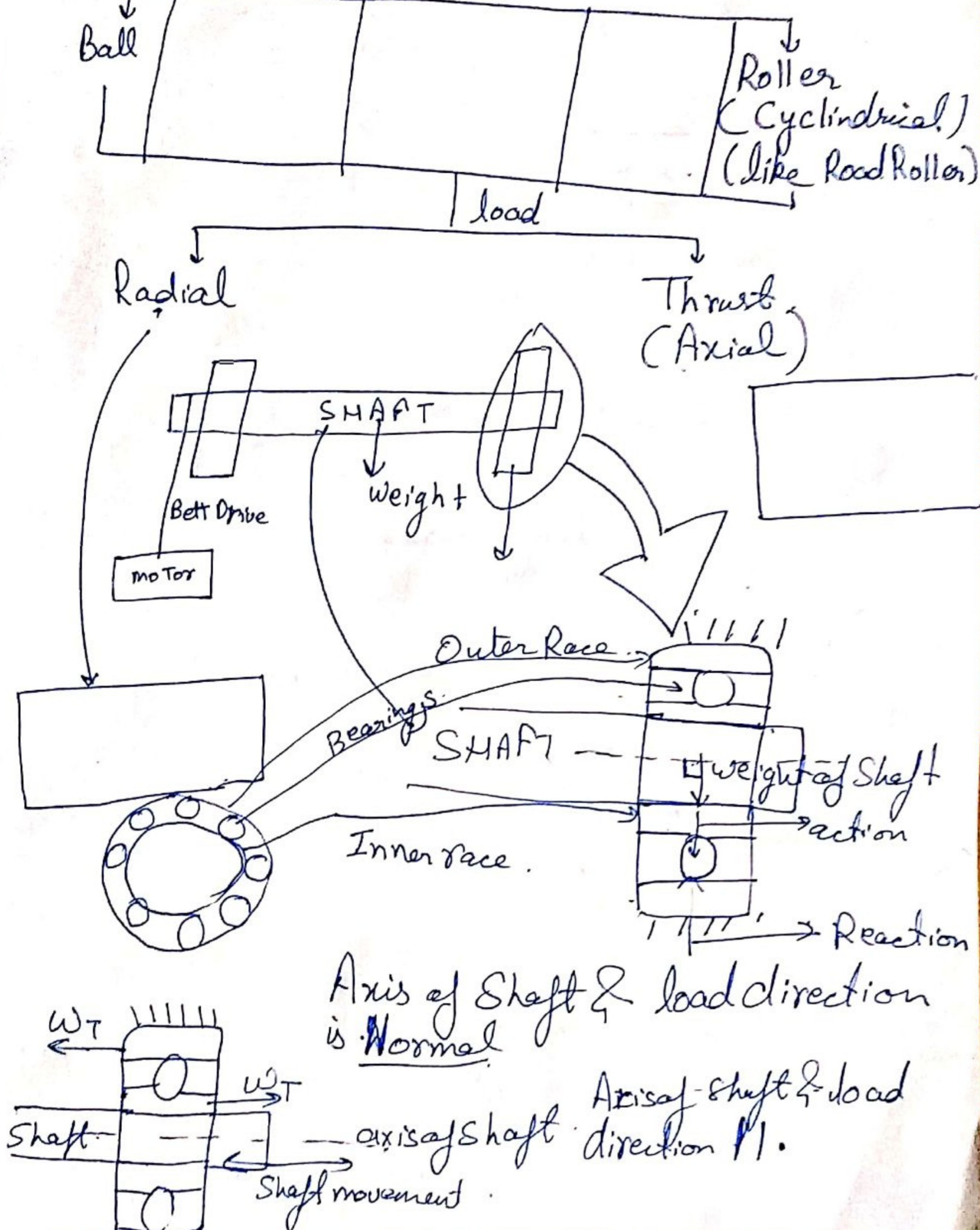
Advantage

- ① Low starting force (low Point & line Contacting).
- ② Compact.
- ③ Low maintenance (No leakage \Rightarrow No lubrication)
- ④ Cleanliness

Disadvantage.

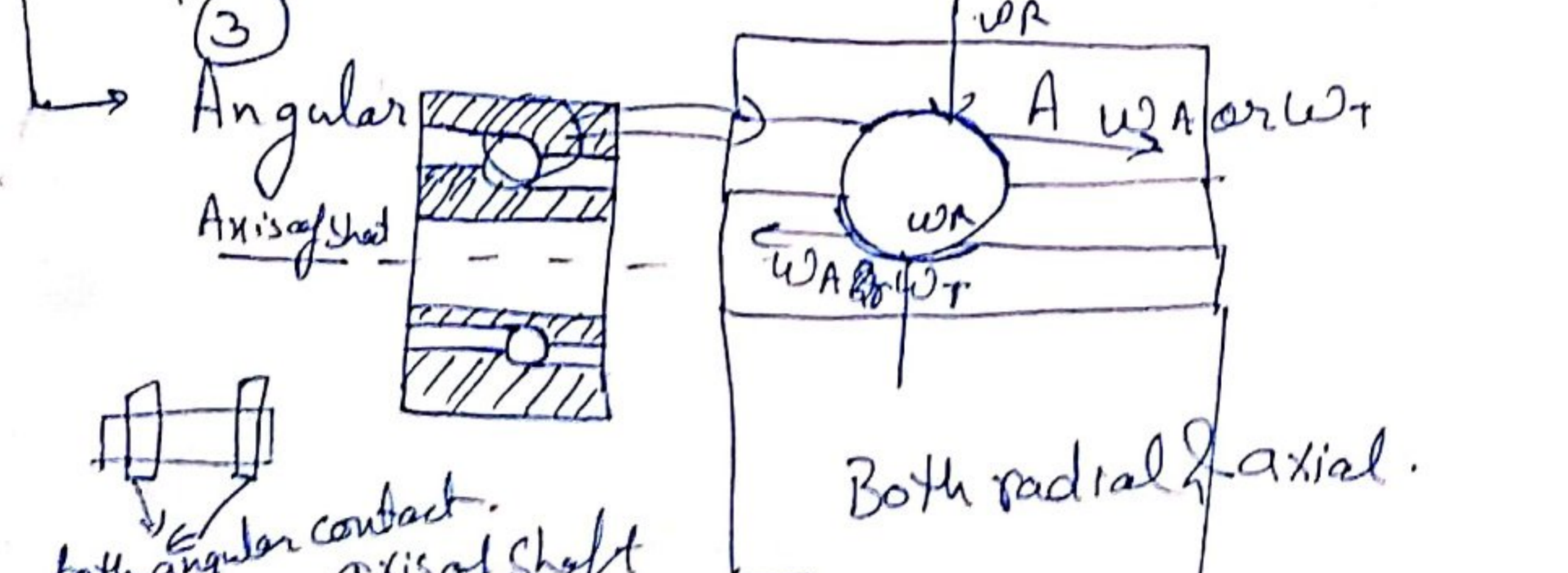
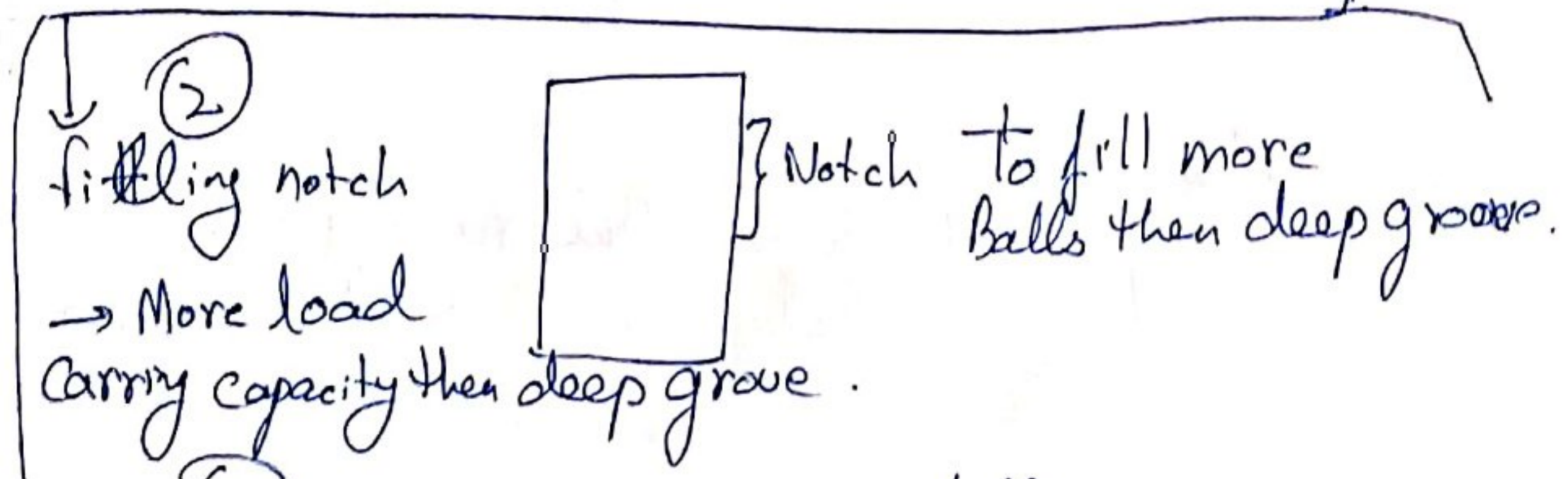
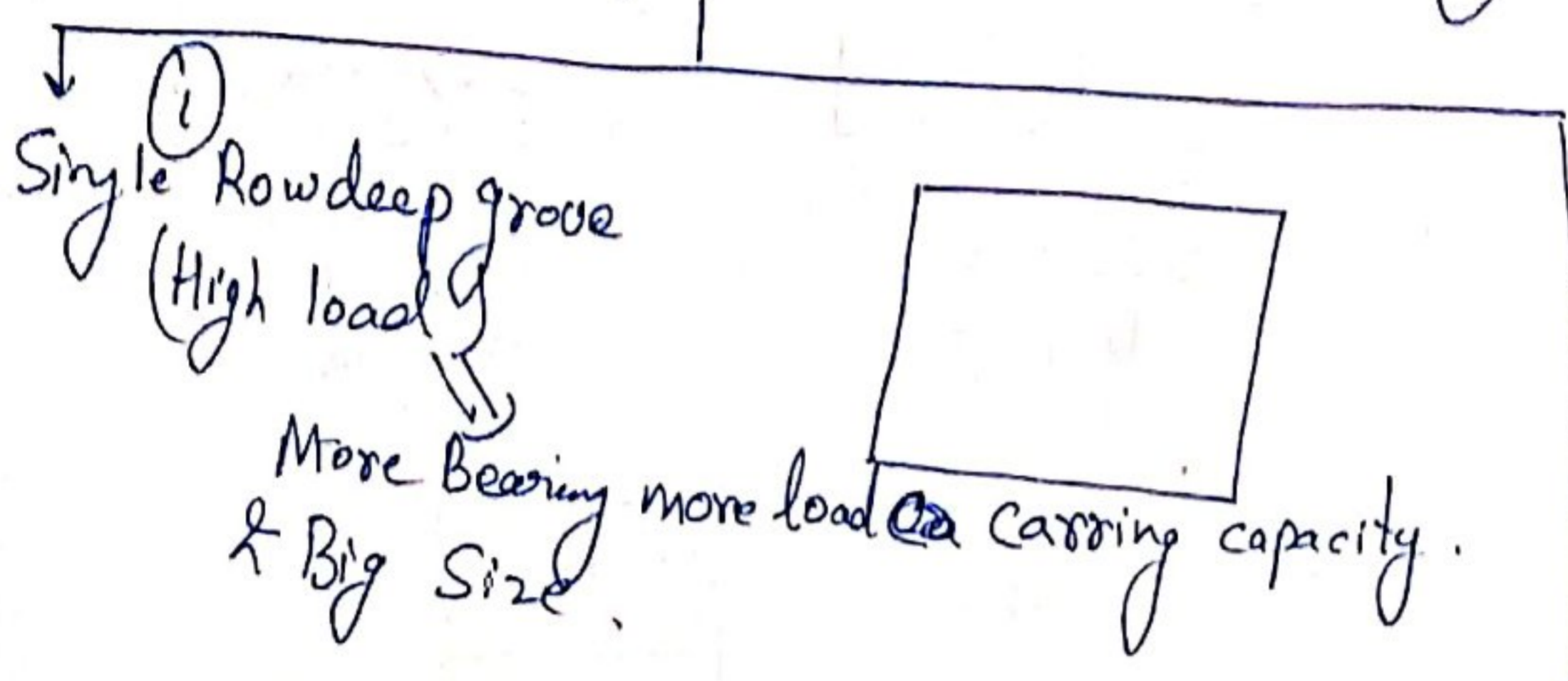
- ① Noisy (metal to metal contact).
- ② No Shock loading resistance (if axial \rightarrow Race displace. Radial \rightarrow Deform Race).
- ③ High initial cost [Ball hardened, Perfect Balance, High machined accuracy.]

Types of Rolling Contact Bearing



Both loads Simultaneously.

Types of Radial Ball Bearing



- ① Notch cut (More Balls than deep groove)
- ② used in pairs

