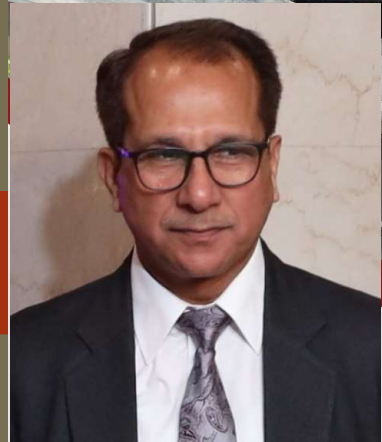


Equilibrium of Rigid Bodies



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Equilibrium of Rigid Bodies

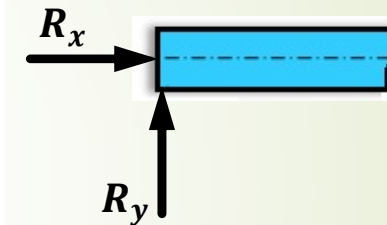
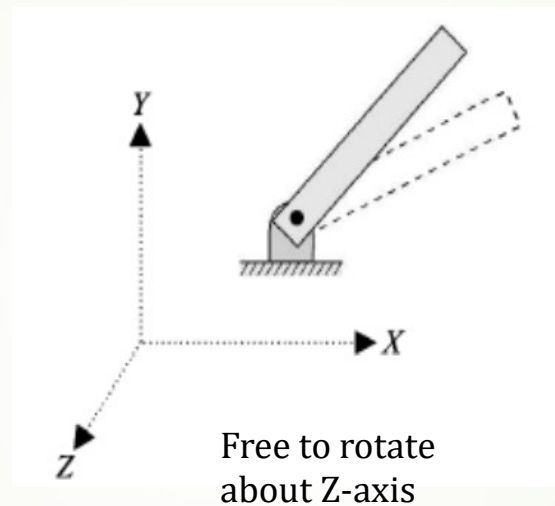
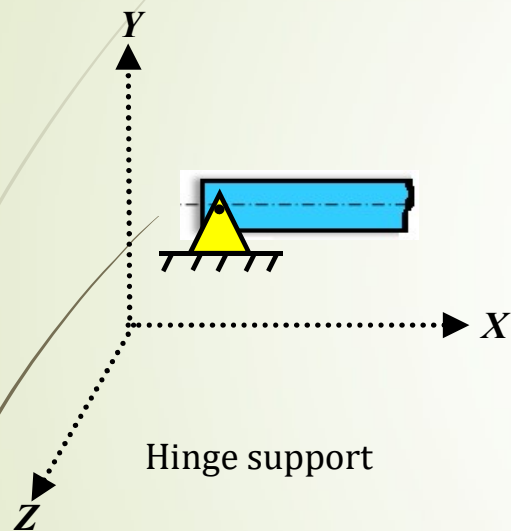
Supports

In case of **rigid bodies**, particularly the beams, to prevent not only **translating motion** but also **rotational motion**, these bodies are held by various supports.

Hinge Support



Hinge or pin-support



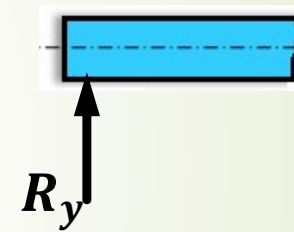
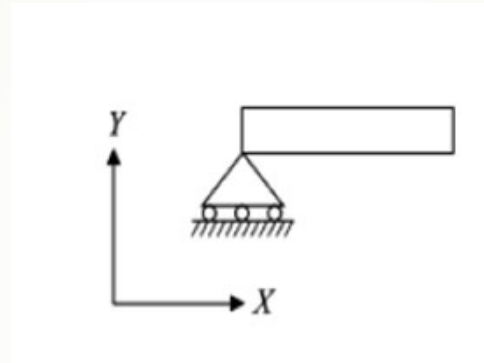
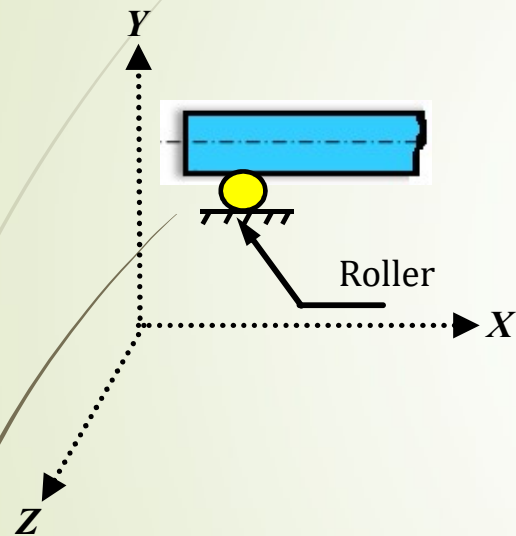
Reactions exerted by hinge support on the body

The pin support restrains the beam from **translating** both **horizontally and vertically**, but it does not prevent rotation.

Roller Support



Roller of frictionless support



At the roller support, **translation** is prevented in the vertical direction but not in the horizontal direction.