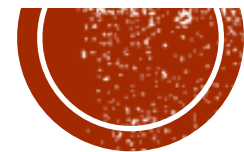


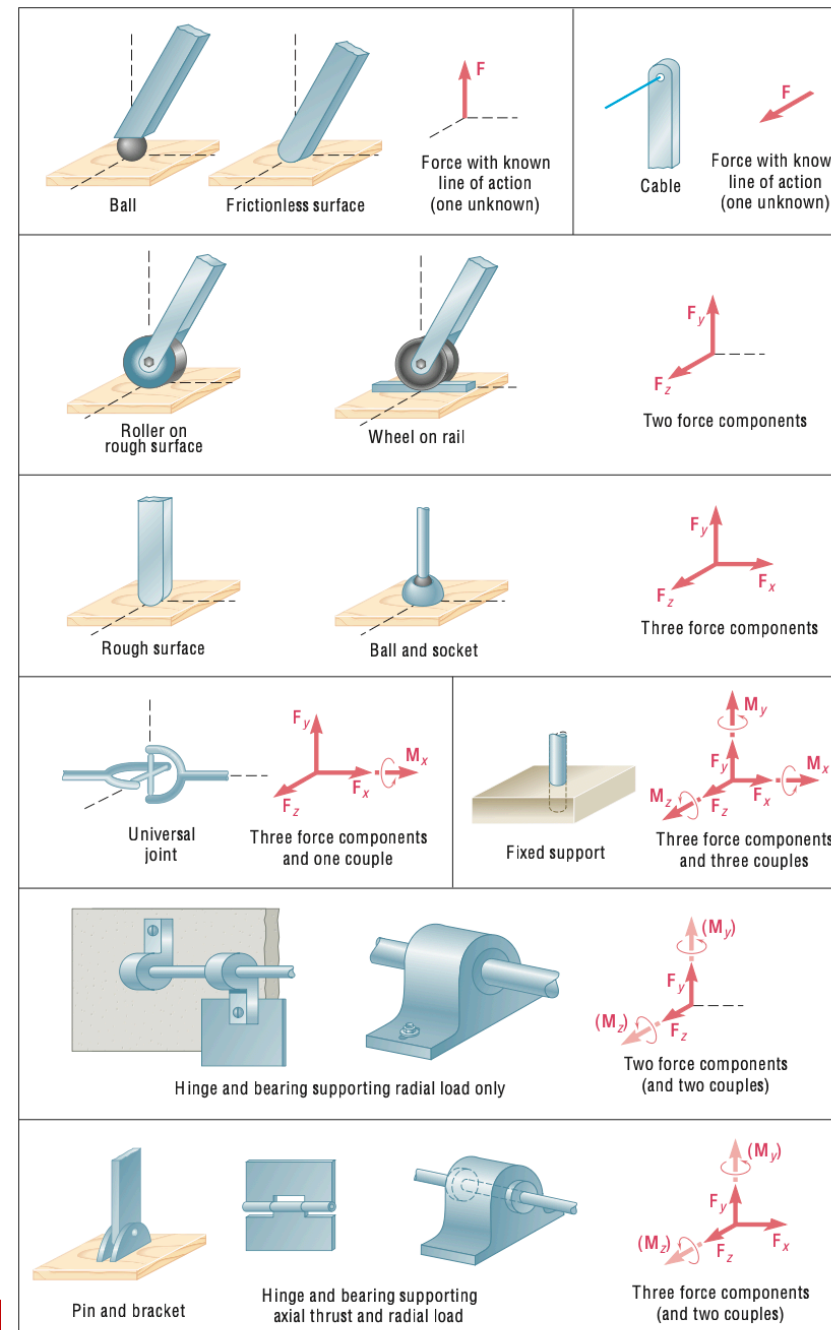
Lecture 6

Equilibrium of Rigid Bodies

■ Dr. Abdul Aziz Shuvo
Assistant Professor
ME, BUET



Equilibrium in 3D body



Dr. Abd

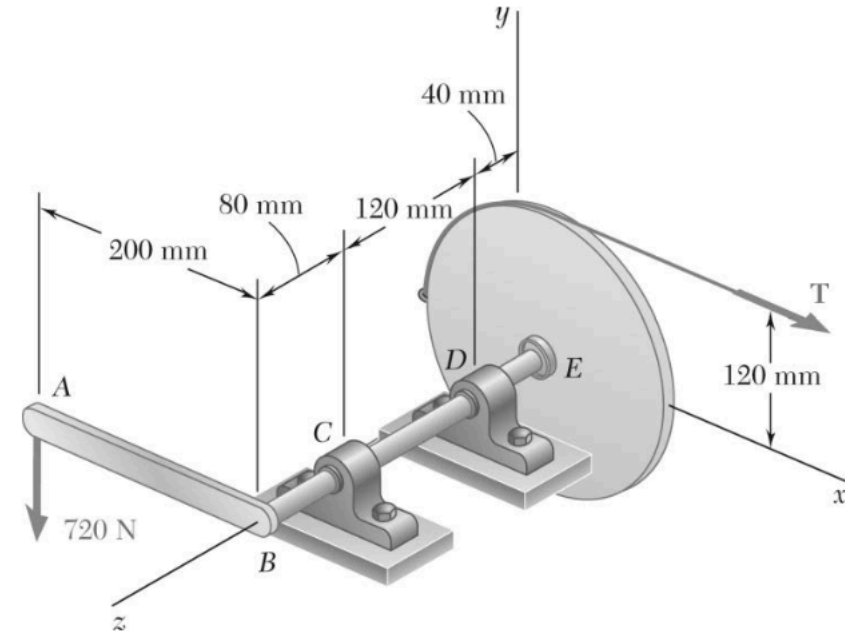
Fig. 4.10 Reactions at supports and connections.



Mechanical
Engineering

Problem 1

A 200-mm lever and a 240-mm-diameter pulley are welded to the axle BE that is supported by bearings at C and D . If a 720-N vertical load is applied at A when the lever is horizontal, determine (a) the tension in the cord, (b) the reactions at C and D . Assume that the bearing at D does not exert any axial thrust.



Problem 2

A 2.4-m boom is held by a ball-and-socket joint at C and by two cables AD and AE . Determine the tension in each cable and the reaction at C .

