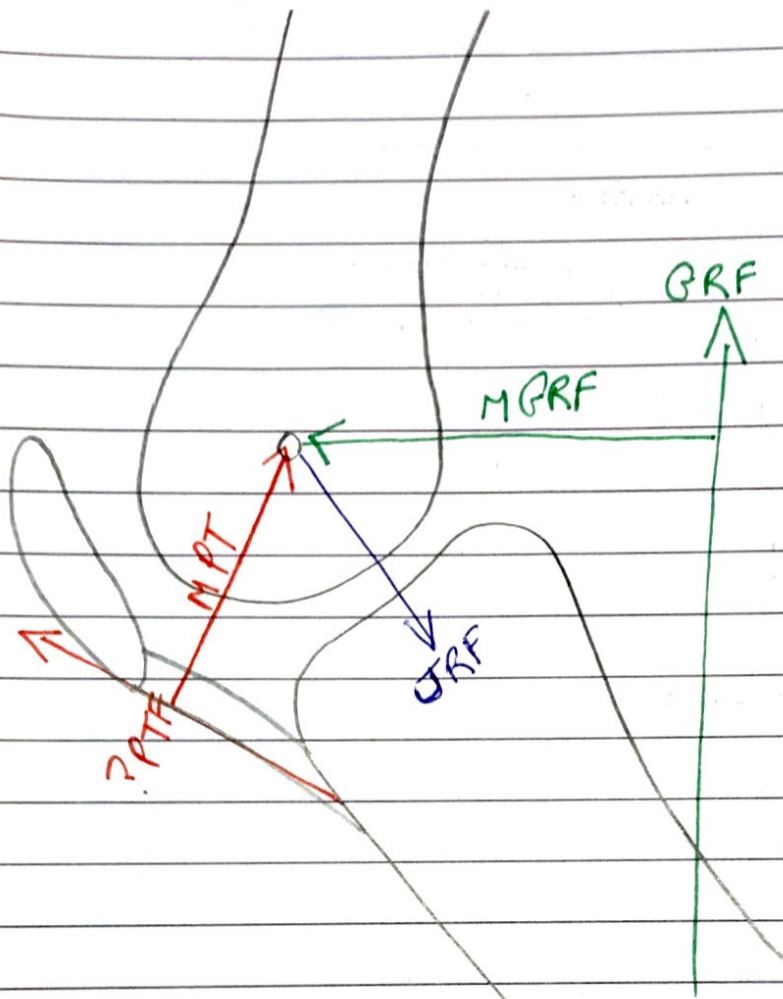


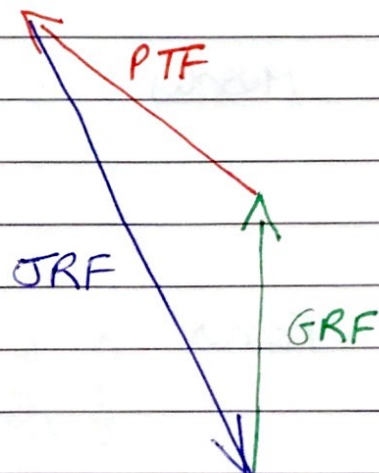
TIBIO FEMORAL FBD



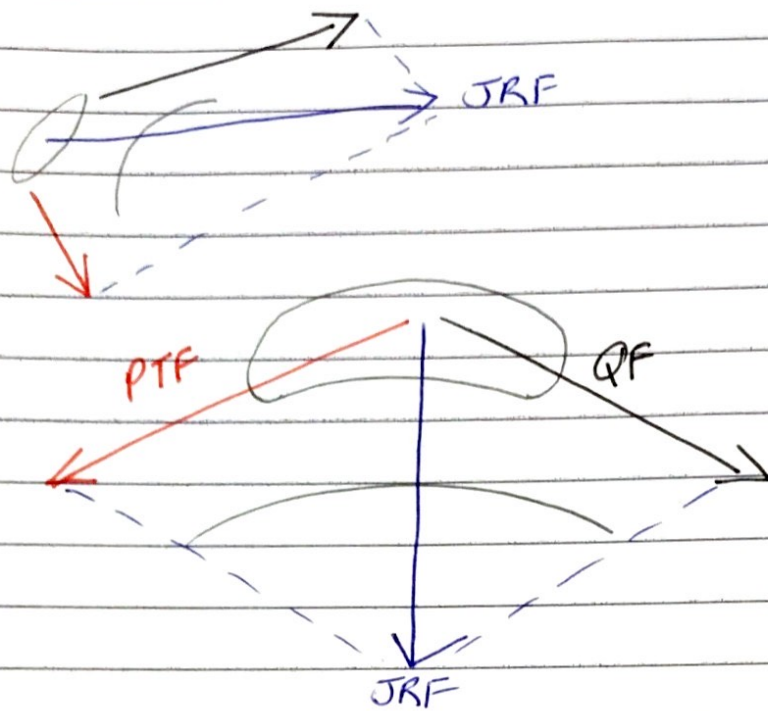
$$PTF \times MPT = GRF \times MGRF$$

$$PTF = \frac{GRF \times MGRF}{MPT}$$

GRF calculated by



PATELLO FEMORAL FBD



Patellofemoral JRF is equal to the sum of the
quads & PTF $\therefore$ is significantly high
 $\uparrow$ with flexion

ASSUMPTIONS

Bones & jts

Bones are rigid

Jts are frictionless hinges

Jt reaction forces are assumed to be
only compressive

Muscles

No antagonistic muscle action

Muscles act only in tension

Line of action is along the centre of the
cross sectional area of the muscle

Forces

Internal forces cancel each other out
Weight of body concentrated over COG