



Philadelphia University

Faculty of Engineering

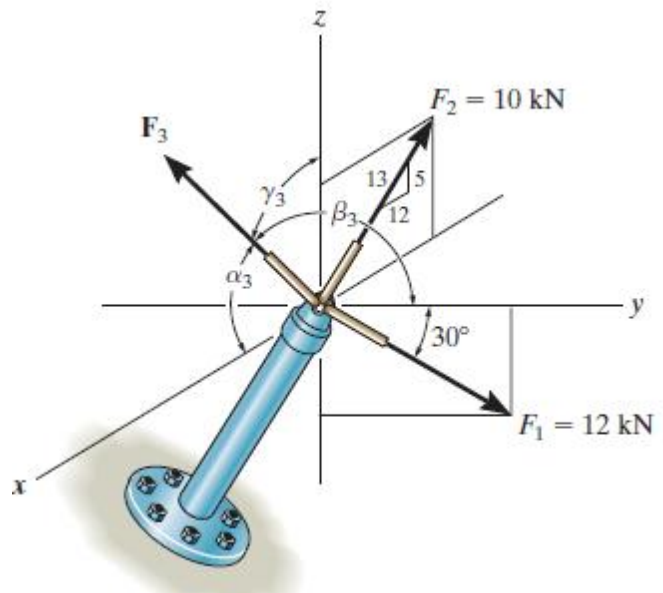
Mech. Engineering Department

Statics(620211)

Quiz:1-D .1<sup>st</sup> sem. 2014/15

Dr.Nabil musa

Express the forces  $\mathbf{F}_1$  and  $\mathbf{F}_2$  in cartesian vector form.



$$\mathbf{F}_1 = 12 \cos 30^\circ \mathbf{j} - 12 \sin 30^\circ \mathbf{k} = 10.392 \mathbf{j} - 6 \mathbf{k}$$

$$\mathbf{F}_2 = -\frac{12}{13}(10) \mathbf{i} + \frac{5}{13}(10) \mathbf{k} = -9.231 \mathbf{i} + 3.846 \mathbf{k}$$