Quiz 1, Engrd 202, Feb 7, 2003 | Name: _____

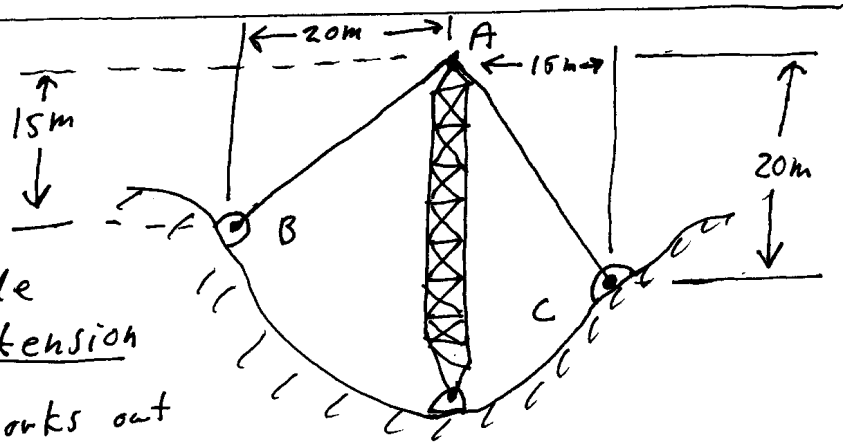
Section day & time: _____ TA: _____

Closed book. No notes. No Calculators.

1) (7pts)

The net force on A from the two cables is a force that points down and has magnitude of 125N. Find the tension in cable AB.

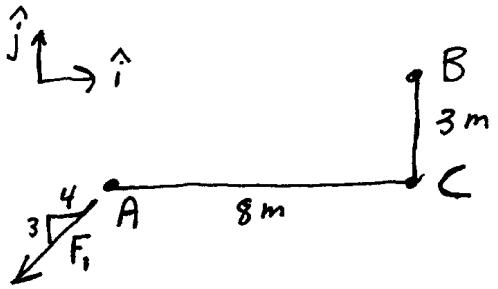
(Hint: the arithmetic works out well.)



T_{AB} =

2) (10 pts) $\underline{F}_1$ at A and $\underline{F}_2 = 7N\,\hat{i}$ (unknown location) together are equivalent to a force $\underline{F}_B$ and moment $\underline{M}_B = 48 N\text{m}\,\hat{k}$ at B and (also) to a force $\underline{F}_C$ and moment $\underline{M}_C = 75 N\text{m}\,\hat{k}$ at C. Find $\underline{F}_C$ and the line of action of $\underline{F}_2$.

[Hint: all arithmetic ends up tidy.]



$\underline{F}_C =$ _____ $\hat{i}$ + _____ $\hat{j}$

The line of action of $\underline{F}_2$ is defined by the equation: