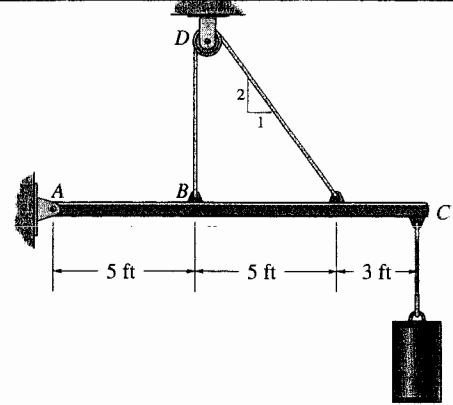
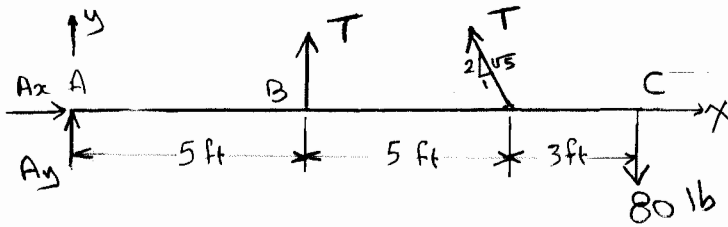


**Written Quiz # 6**

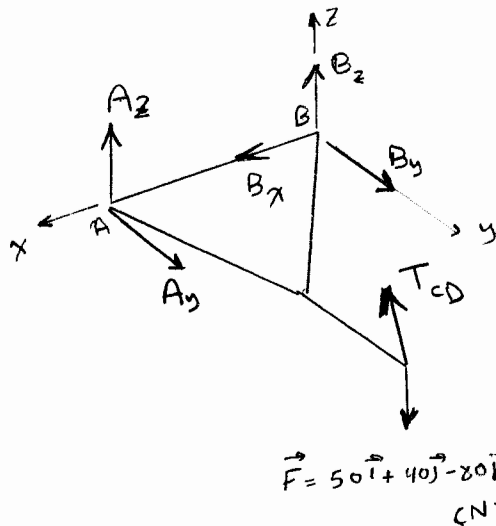
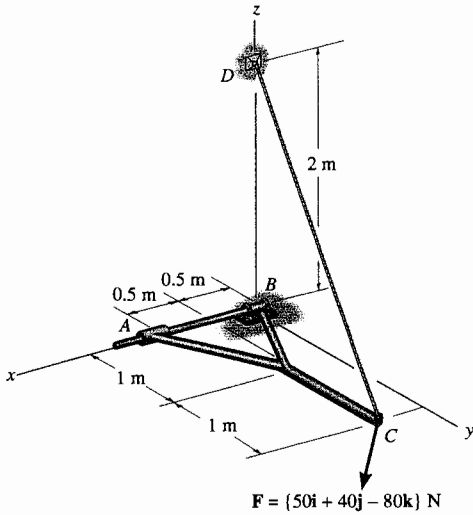
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In each of the three problems, draw the complete free body diagram only.

1) Determine the tension in the cable and the horizontal and vertical components of reaction of the pin A. The pulley at D is frictionless and the cylinder weighs 80 lb.



2) The forked rod is supported by a collar at A, a thrust bearing at B, and a cable CD. Determine the tension within cable CD and the x, y, z components of reaction at supports A and B due to the loading shown. The supports at A and B are in proper alignment and exert only force reactions on the rod.



3) The windlass supports the 50-kg mass. Determine the horizontal force P needed to hold the handle in the position shown, and the x, y, z components of reaction at the ball-and-socket joint A and the smooth bearing B. The bearing at B is in proper alignment and exerts only a force reaction on the windlass.

