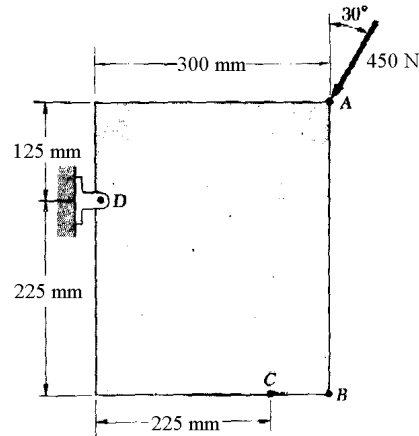


# 義守大學九十二學年度轉學生入學招生考試

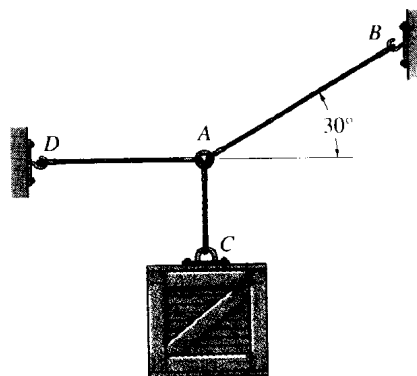
## 『應用力學』參考試題

(每題 20 分)

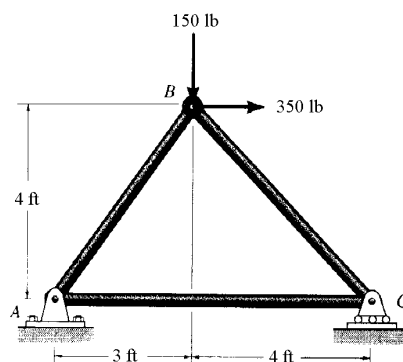
1. A 450-N force is applied at A. Determine (a) the moment of the 450-N force about D, (b) the magnitude and sense of the horizontal force applied at C which creates the same moment about D.



2. Determine the tension in cords AB and AD for equilibrium of the 10-kg crate shown in the figure. (assume the acceleration of gravity  $g = 10 \text{ m/s}^2$ )



3. Determine the force in each member of the truss and indicate the members are in tension or compression.

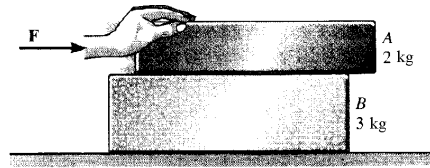


4. Block B rests on a smooth surface. If the coefficients of static and kinetic friction between A and B are  $\mu_s = 0.4$  and  $\mu_k = 0.3$ , respectively, determine the acceleration of each block if someone pushes horizontally on

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## 『應用力學』參考試題

block A with a force of (a)  $F = 6 \text{ N}$  (b)  $F = 50 \text{ N}$ . (assume the acceleration of gravity  $g = 10 \text{ m/s}^2$ )



5. Block D shown in the figure moves with a speed of  $3 \text{ m/s}$ . Determine the angular velocities of links BD and AB, and the velocity of point B at the instant shown.

