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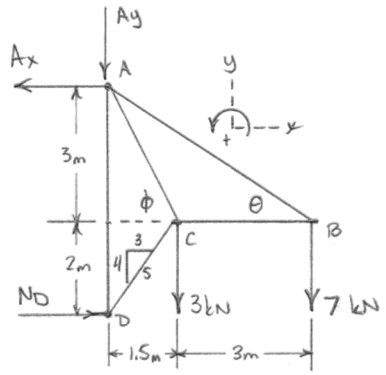
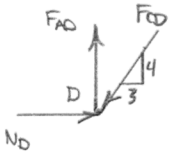
$\theta = \tan^{-1}\left(\frac{3}{4.5}\right) \rightarrow \theta = 33.69°$ $\quad \phi = \tan^{-1}\left(\frac{3}{1.5}\right) \rightarrow \phi = 63.43°$



$\Sigma M_A = 0$: $5N_D - 1.5(3) - 4.5(7) = 0$

$N_D = 7.20$ kN

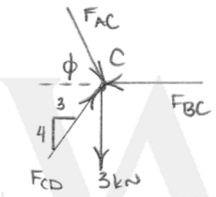
• JOINT D:



$\Sigma F_x = 0$: $N_D - \frac{3}{5} F_{CD} = 0 \rightarrow$ $F_{CD} = 12$ kN C

$\Sigma F_y = 0$: $F_{AD} - \frac{4}{5} F_{CD} = 0 \rightarrow$ $F_{AD} = 9.60$ kN T

• JOINT C:

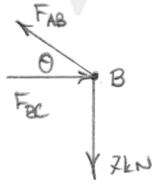


$\Sigma F_x = 0$: $\frac{3}{5} F_{CD} + F_{AC} \cos\phi - F_{BC} = 0$

$\Sigma F_y = 0$: $\frac{4}{5} F_{CD} - F_{AC} \sin\phi - 3 = 0$

$\rightarrow$ $F_{BC} = 10.50$ kN C; $F_{AC} = 7.38$ kN C

• JOINT B:



$\Sigma F_y = 0$: $F_{AB} \sin\theta - 7 = 0 \rightarrow$ $F_{AB} = 12.62$ kN T