82

$\sum M_A = 0$

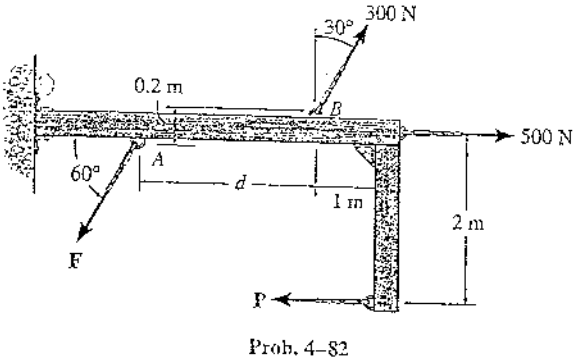
$300\cos 30 * d - 300\sin 30 * 0.2 - P * 2 = 0 \quad \cdots (1)$

$259.8d - 30 - 2P = 0 \quad \cdots (1)$

$\sum y = 0$

$F\sin 60 + 300\cos 30 = 0$

$F = 300$



Prob. 4–82

$\sum x = 0 \Rightarrow 300\cos 60 - P + 50 + 300\sin 30 = 0 \therefore P = 500$

From eqn (1) $\Rightarrow 259.8d - 30 - 2 * 500 = 0$

$\Rightarrow d = 2.04$