H.W. # 5

4-101

$\Sigma F_x = -60 * \cos 30^\circ = -51.96\ N$

$\Sigma F_y = -60 * \sin 30 - 140 = -170$

$F_R = \sqrt{(-51.96)^2 + (-170)^2} = 177.76\ N$

$M_P = 60 \cos 30 * 8 + 60 \sin 30 * 4 + 140 * 15$

$= 2635\ N\text{-}M$

$M_P = 2.68\ kN\text{-}M$

4-101. Replace the force and couple moment system by an equivalent force and couple moment acting at point *P*.