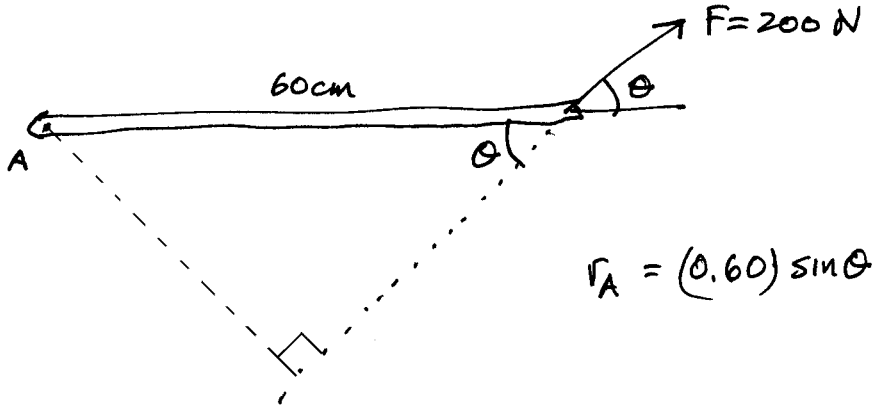
5.8



$r_A = (0.60)\sin\theta$

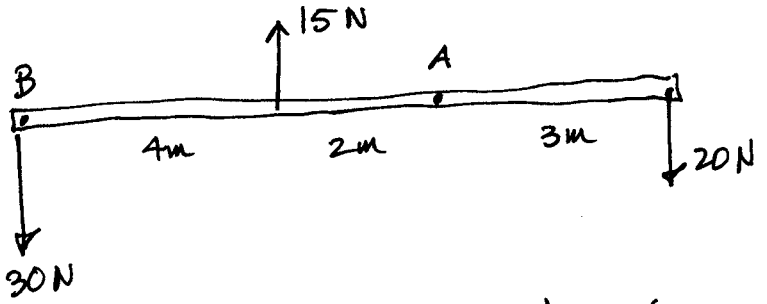
a) $\theta = 90°$: $\tau_A = 200(0.60)\underbrace{\sin 90°}_{1} = \boxed{120\ N\cdot m}$

b) $\theta = 60°$ $\tau_A = (200)(0.60)\sin 60° = \boxed{103.9\ N\cdot m}$

c) $\theta = 30°$ $\tau_A = 200(0.60)\sin 30° = \boxed{60\ N\cdot m}$

d) $\theta = 0$ $\tau_A = 200(0.60)\underbrace{\sin 0°}_{0} = \boxed{0}$

5.11 & 5.12



$\circlearrowleft + \quad \tau_A = 6(30) - 2(15) - 3(20$

$= 180 - 30 - 60 = \boxed{90\ N\cdot m}$

$\circlearrowleft + \quad \tau_B = 0(30) + 4(15) - 9(20)$

$= 60 - 180 = \boxed{-120\ N\cdot m}$

5.16 & 5.17

$\circlearrowleft + \quad \tau_A = -0.20(80) + (0.6)(160)\sin 40° = \boxed{45.7\ N\cdot m}$

$\tau_B = -(0.2)(80) = \boxed{-16\ N\cdot m}$