

CE 201 (486) [081]

H.W. # 5 Final Answers

1) a- $M = 146.5$ or 120.4

b- $\theta = 90$ or 45 or 36.87

c- $T = 354.7$ or 250.0

2) $\vec{M}_R = 24,000\vec{i} - 12,000\vec{j} - 20,000\vec{k}$

or
 $= -54,000\vec{i} + 24,000\vec{j} + 18,000\vec{k}$

3) $\vec{F}_A = 1607\vec{i} + 439.2\vec{j} - 507.1\vec{k}$

or
 $= 924.5\vec{i} - 411.5\vec{j} + 1235\vec{k}$

$\vec{M}_A = 20\vec{i} - 19.51\vec{j} + 84.51\vec{k}$

or
 $= 30.0\vec{i} + 17.68\vec{j} + 118.9\vec{k}$ (N·m)

4) $F_R = 1.8$ or 4.86

$\bar{x} = 1.2$ or 1.3

5) $F_R = 2.23$ or 4.4

$\bar{x} = 1.727$ or 1.995