

III / CROSS PRODUCT:

(65)

from Before: $\vec{R} = -1876\hat{i} + 7000\hat{j}$

\vec{r} ... vector from G to A is $-1.0\hat{i} - 0.5\hat{j}$

then $\vec{r} \times \vec{R}$ is $\text{Det} \begin{pmatrix} \hat{i} & \hat{j} & \hat{k} \\ -1.0 & -0.5 & 0 \\ -1876 & 7000 & 0 \end{pmatrix}$

$$= \hat{i}((-0.5)(0) - (7000)(0))$$

$$- \hat{j}((-1.0)(0) - (-1876)(0))$$

$$+ \hat{k}((-1.0)(7000) - (-1876)(-0.5))$$

$$= \hat{k}(-7000 - 938)$$

$$\vec{M}_k = -7938\hat{k}$$

same as before including sign