

Helpful? hints for 25.13

- Stare, transfixed, at [CO pg 969].
- Then actually read it.
- Note that unit vectors \hat{i}, \hat{j} and $\hat{k} = \hat{e}_z$ are constant in time.
- But unit vectors \hat{e}_R, \hat{e}_ϕ are not constant in time.

$$\dot{\hat{e}}_\phi = -\hat{e}_R \dot{\phi}$$

$$\hat{e}_R = \hat{i} \cos \phi + \hat{j} \sin \phi$$

$$\hat{e}_\phi = -\hat{i} \sin \phi + \hat{j} \cos \phi$$