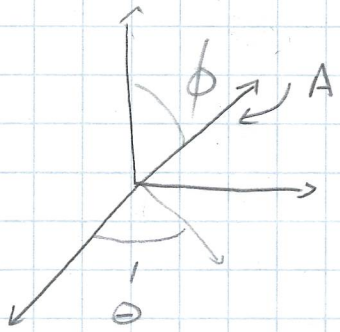
20-P-KM-AF-012

Curvilinear Motion.

Q: If the particle moves at a speed of $v = A$ m/s, what is the cartesian components if it makes angle $\theta = B°$ to the x-axis in the xy plane and angle $\phi = C°$. Where is the particle in $t = D$ s.



A:

$$A_z = A\cos\phi$$
$$A_x = A\sin\phi\cos\theta$$
$$A_y = A\sin\phi\sin\theta$$

$$p = (A_x \cdot C, A_y \cdot C, A_z \cdot C)$$