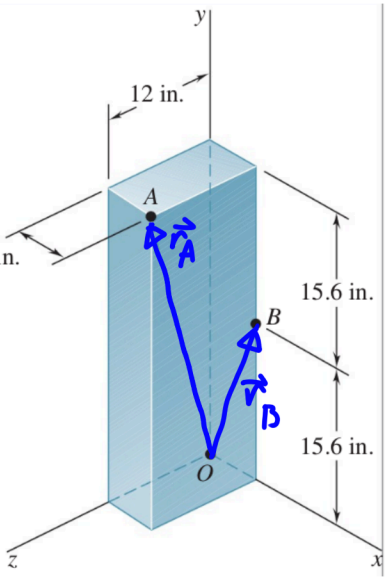
The rectangular block shown rotates about the diagonal OA with a constant angular velocity of 6.76 rad/s. Knowing that the rotation is counterclockwise as viewed from A, determine the velocity and acceleration of point B at the instant shown.



$\vec{r}_A = 5i + 31.2j + 12k$ in

$|\vec{r}_A| = \sqrt{5^2 + 31.2^2 + 12^2}$

$= 33.8$ in

$\lambda_A = \dfrac{\vec{r}_A}{|\vec{r}_A|}$

$\vec{r}_B = 5i + 15.6j$ in