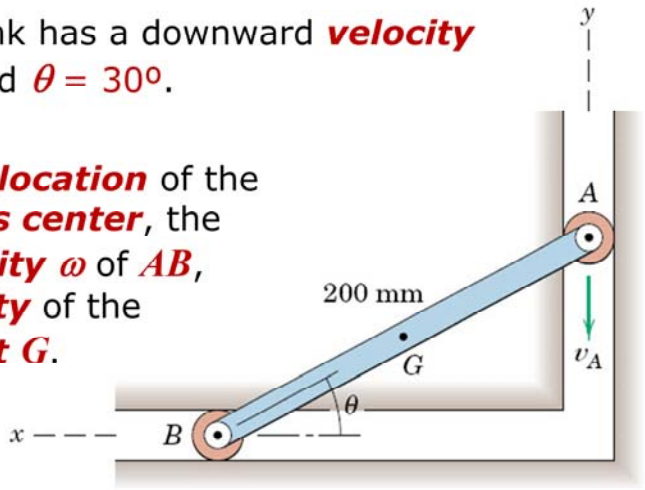
Instantaneous Center: Exercise

End A of the link has a downward ***velocity*** $\mathbf{v}_A$ = 2 m/s. and θ = 30º.

Determine the ***location*** of the ***instantaneous center***, the ***angular velocity*** ω of AB, and the ***velocity*** of the link's ***midpoint*** G.



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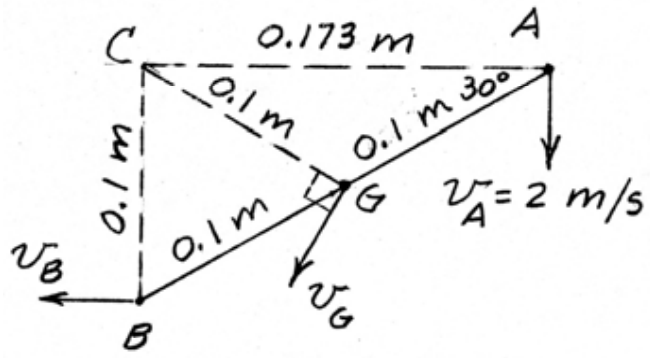

$\omega = v_A / \bar{AC}$

$= 2/0.1732 = \underline{11.55 \text{ rad/s}}$ CW

$v_G = \bar{CG}\,\omega$

$= 0.1(11.55)$

$= \underline{1.155 \text{ m/s}}$