DYNAMICS ASSIGNMENT

Planar Kinematics of a Rigid Body (Instantaneous Centre of Zero Velocity)
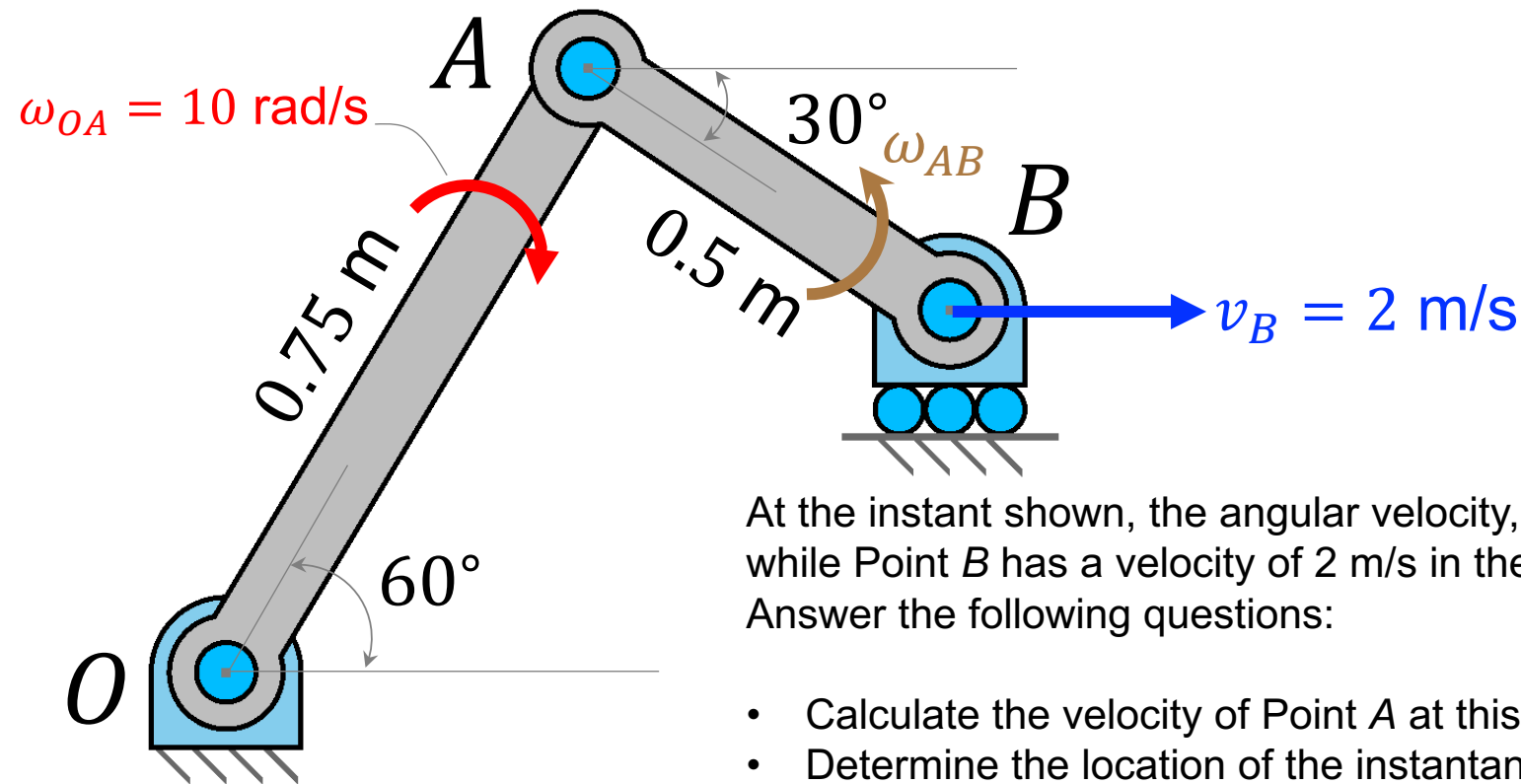
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Question 1 – Instantaneous Centre

$\omega_{OA} = 10$ rad/s

A

0.75 m

$60°$

O

$30°$

ω_{AB}

0.5 m

B

$v_B = 2$ m/s

At the instant shown, the angular velocity, $\omega_{OA} = 10$ rad/s, while Point *B* has a velocity of 2 m/s in the direction shown. Answer the following questions:

- Calculate the velocity of Point *A* at this instant.
- Determine the location of the instantaneous centre of zero velocity.
- By using the IC method, calculate the angular velocity of link *AB*.