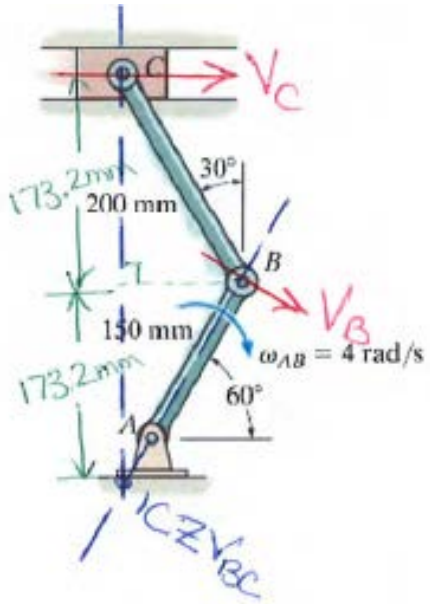
Problem 4. Bar *AB* rotates at 4 rad/s in the clockwise direction as shown. Determine the velocity of point *C*.



From bar AB:

$V_B = \omega_{AB} r_{B/A}$

$= (4)(150)$

$= 600 \text{ mm/s}$

From bar BC:

$V_B = \omega_{BC} r_{B/IC}$

$\omega_{BC} = V_{B/} r_{B/IC}$

$\omega_{BC} = \frac{600 \text{ mm/s}}{200 \text{ mm}}$

$\omega_{BC} = 3 \text{ rad/s}$

using similar triangles

$r_{B/IC}$ = length of bar BC

= 200 mm

$V_C = \omega_{BC} r_{C/IC} = (3)(173.2 + 173.2) = 1039.2 \text{ mm/s}$

Answer: $V_C = 1.039$ m/s $\rightarrow$