Q1 - Answer = c

Q2 - Problem A - Last name A-K

A car accelerates on a circular track of radius 1 km (1000 m). If it starts at rest and reaches a speed of 50 m/s at the end of 2 seconds, what is its average angular acceleration in radians/s^2?

A. $\pi/1000$

B. $2\pi/1000$

C. $50/\pi$

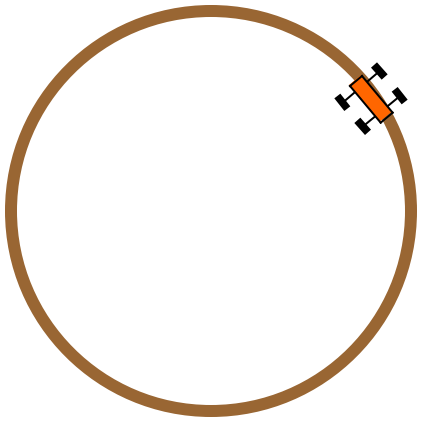
D. 1/40

E. 1/20

$\omega = v/r$; $\omega_0 = 0$

$\alpha = (\omega - \omega_0)/t =$

$v/(rt) = 50/(2000)$
$= 1/40$



Q1 - Answer = c

Q2 - Problem B - Last Name L-Z

- An automobile goes around a circular track of radius 750 m. If it accelerates from 15 to 30 m/s in a time of 7.5 s, what is its angular acceleration in radians/s ^{2}?

A. $\pi/750$

B. $2\pi/750$

C. 2.0

D. 1/750

E. 2/750

$\omega_0 = v_0/r$; $\omega = v/r$

$\alpha = (\omega - \omega_0)/t =$

$(v - v_0)/(r\ t) =$

$(30\text{-}15)/(750\text{x}7.5) =$

$2/750 = 2.67\text{x}10^{-3}$