

# 20-KM-AF-005

## Rectilinear Erratic Motion: ~~Ammed~~ Intermediate

Q: A boat starts at rest and from the origin. It then travels along a straightline producing the graph below. Determine the acceleration at  $t = 2\text{ s}$  and  $t = 6\text{ s}$ .

[graph attached]

A: use  $a = dv/dt$

for  $0 < t < 3$

$$a = \frac{4/3 t}{dt} = 4/3$$

for  $3 < t < 9$

$$a = \frac{\left[-\frac{2}{3}t + 6\right]}{dt} = -2/3$$

