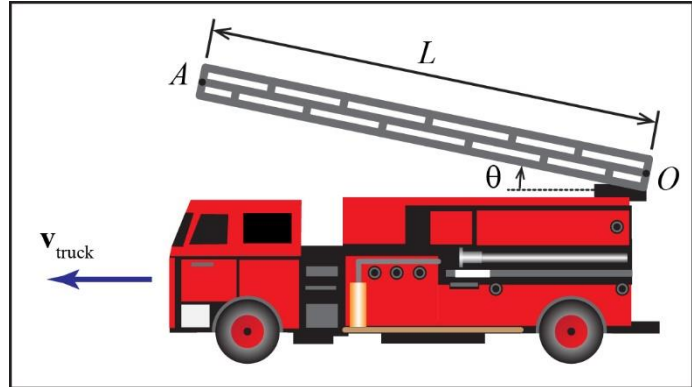**P4.4-5)** A firetruck is traveling at a constant speed of 50 mph in the direction shown. At the same time, the latter (L = 12 ft) on the top of the truck is being rotated up at a rate of $\omega = t$ rad/s where t is in seconds. What is the acceleration of point A at t = 2 s.

Given:

Find:

Solution:

Determine the angular position, angular speed and angular acceleration of the latter at t = 2 s.

Draw the angular speed and angular acceleration on the figure.

θ = _____

ω = _____

α = _____

Determine the linear acceleration of point A.

Draw a coordinate system on the figure.

$\mathbf{a}_A$ = _____