PROBLEM: AP-11
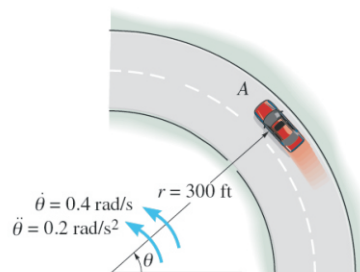
GIVEN:

A car is traveling along the circular curve of radius $r = 300$ ft. At the instant shown, its angular rate of rotation is $\dot{\theta} = 0.4$ rad/s, which is increasing at the rate of $\ddot{\theta} = 0.2$ rad/s^2. Determine the magnitudes of the car's velocity and acceleration at this instant.

$\dot{\theta} = 0.4$ rad/s
$\ddot{\theta} = 0.2$ rad/s^2

$r = 300$ ft

A

θ

REQUIRED:

SOLUTION: