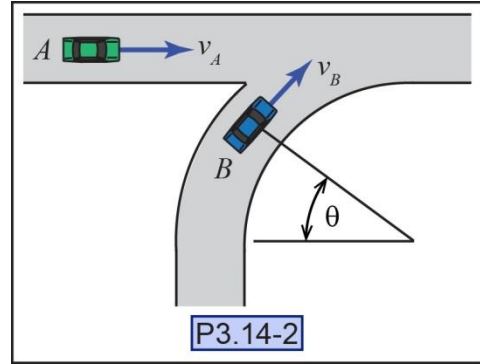**P3.14-2)** Car A is traveling along a straight road with a speed of 20 m/s increasing at a rate of 8 m/s^2 when it sees car B attempting to merge. Car B is traveling with constant speed 10 m/s around a curve with radius 20 m. What velocity and acceleration does car B appear to have to the driver of car A at the instant when θ = 40 degrees?

P3.14-2

Given:

Find:

_____

Solution:

Write the car velocities in vector form.	**Write the car accelerations in vector form.**

$\mathbf{v}_A =$ _____

$\mathbf{a}_A =$ _____

$\mathbf{v}_B =$ _____

Determine the velocity of car B relative to car A.

$\mathbf{a}_B =$ _____

Determine the acceleration of car B relative to car A.

$\mathbf{v}_{B/A} =$ _____

$\mathbf{a}_{B/A} =$ _____