

P3.7-1) A car rounds a curve of radius 100 ft at a speed of 25 mph. If the magnitude of its total acceleration is 15 ft/s^2 , determine the rate at which its speed is changing.

Given:

Find:

Solution:

Acceleration

Write down the $n-t$ coordinate system acceleration equation.

$\mathbf{a} =$ _____

Write down, in variable form, the total acceleration magnitude equation.

$a =$ _____

Calculate the tangential acceleration.

$a_t =$ _____