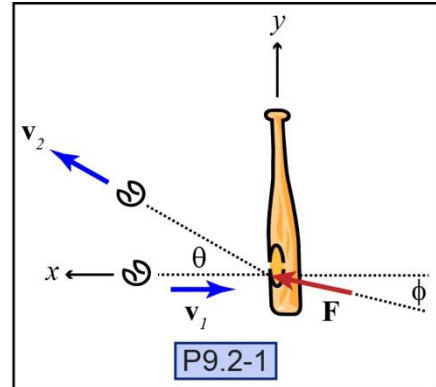


P9.2-1) A 4-oz baseball traveling at $v_1 = 100$ mph gets struck by a bat. The baseball leaves the bat traveling $v_2 = 140$ mph at an angle of $\theta = 35^\circ$ as shown in the figure. Determine the magnitude and direction of the average force that the bat applies to the ball if the impact lasts for 0.02 seconds.



Given:

Find:

Solution:

Using the principle of linear impulse and momentum, calculate the average force applied to the ball from the bat.

Hint: Impulse, momentum and the force are all vector quantities.

F = _____