Homework #11

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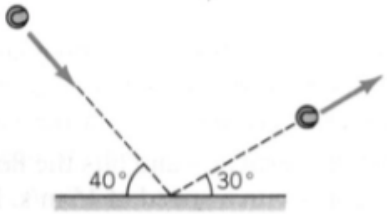
Problem 1

A neutron at rest decays into a proton, an electron, and a neutrino. If the proton's momentum is 3.00×10^{-24} kg m/s in the direction 37° N of E and the electron's momentum is 4.00×10^{-24} kg m/s in the direction 53° S of W, what is the momentum of the neutrino?

Solution

Problem 2

A 60.0-g tennis ball strikes the ground at 25.0 m/s at 40° to the horizontal. It bounces off at 20.0 m/s at 30° to the horizontal. (a) Find the impulse exerted on the ball. (b) If the collision lasted 5.00 ms, find the average force exerted on the ball by the court.



Solution

Problem 3

Solution

Problem 4

Solution

Problem 5

Solution

Problem 6

Solution

Problem 7

Solution

Problem 8

Solution