

Unit Nine Homework

Physics II

Due Monday, June 12, 2020

College of the Atlantic. Spring 2020

Instructions:

- Do this problem in pairs.
 - “Hand in” the problem on google classroom. Please don’t email me the homework; it’s a lot easier for me if you submit it on classroom.
 - In addition to these problems, there are some problems that you should do on Edfinity. There is one Edfinity assignment: Homework 09. You should “hand in” these assignments individually, but of course it’s totally fine—and in fact encouraged—to work on the Edfinity problems with others.
1. Anastajia has a mass of 3 kg. She is running at a speed of 0.6.
 - (a) What is Ana’s total energy in SR units (kilograms)?
 - (b) What is Ana’s kinetic energy in SR units (kilograms)?
 - (c) What is Ana’s kinetic energy in SI units (Joules)?
 - (d) What is the minimum amount of food Ana would have to eat in order for her to have enough energy to run this fast? Express your answer in terms of a mass or volume of your favorite food. (Note that one food calorie is equal to 4180 Joules.)