

Impulse Challenge

Step 1: In the picture below, show the distance between the photogates, the mass of Wally, the force from the fire extinguisher, and the challenge time for making it through the gates



Step 2: Based on the challenge time and the distance between the gates, what speed should Wally have after the extinguisher shuts off? Show your calculation neatly below.

Step 3: Based on Wally's speed and mass, find his momentum when passing through the gates. Show your calculation neatly below.

Step 4: How much time should the extinguisher fire so that that astronaut reaches that momentum? Show your work neatly below and then test it on the program.