Corona Week 5 Impulse

1. Basics

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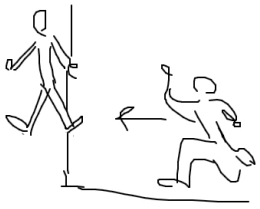
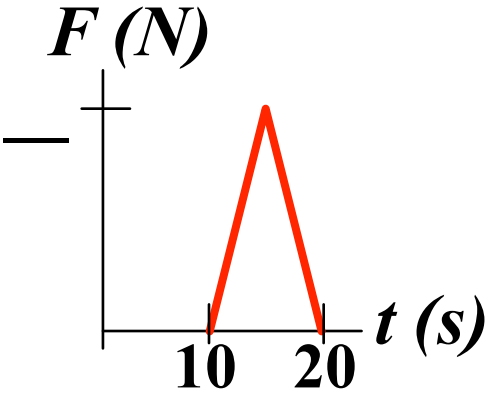
1. The man runs and jumps onto a velcro wall.
The wall applies an average force of ___ N for 0.74 s
to the person. Calculate the impulse delivered to the person.



Choose a two digit force where the first digit is odd and the second digit is even.

2. Given this triangular force vs time graph, calculate the impulse.



Choose a two digit number for the peak force on the graph
where the first digit is even and the second digit is odd.

3. A ball is dropped onto a force plate. The force plate registers an average force of __ N. Next, we repeat the experiment, but we place a soft piece of foam on top of the force plate which triples the amount of time that the ball takes to stop.

a) Predict the new average force.
b) In which case was the impulse greater?

Choose a force between 5 N and 25 N that is not a multiple of 5.

4. In problem #1, what was the impulse delivered to the velcro wall? What was the average force on the velcro wall?

5. Explain using physics terms how the pads that sports players wear keeps them safer.