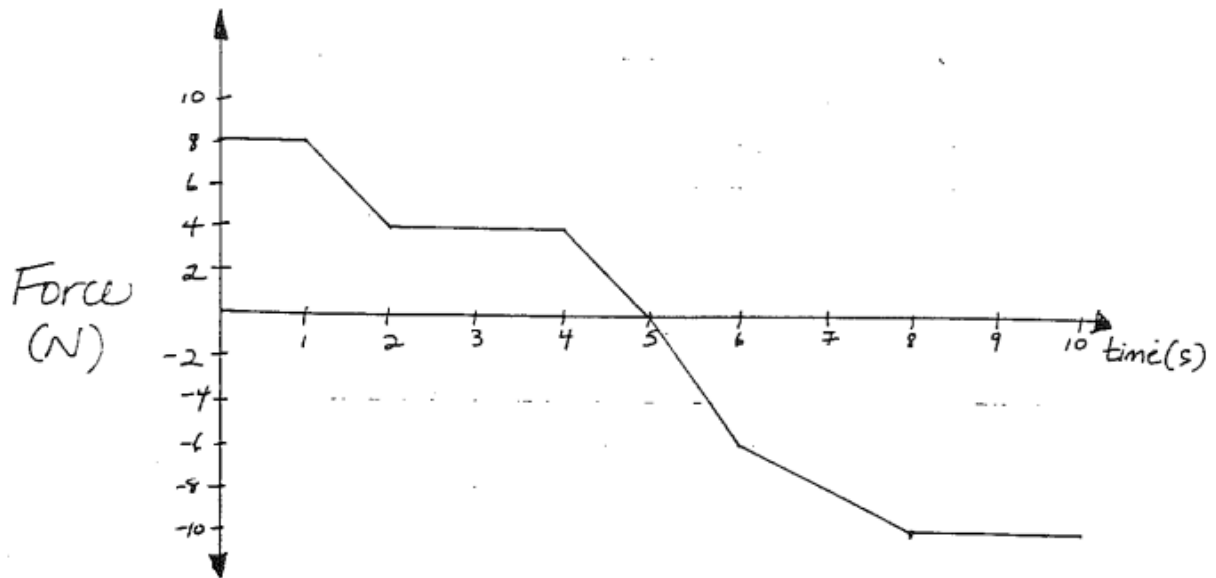


Force vs Time Graphs

Recall, impulse is the product of force and time, $J = F\Delta t$. What if we have a force vs time graph?

Therefore, we can find impulse from the area under a force vs time graph.

A 2 kg object is acted upon by a force described by the force vs. time graph below. At $t = 0$ s, the object has a velocity of 0 m/s.



1. What impulse is given to the object during the first second?
2. What is the change in momentum of the object from 2 to 4 seconds?
3. How can impulse be determined from a force vs time graph?
4. What is the change in momentum of the object from 0 to 10 seconds?
5. What is the object's final velocity?