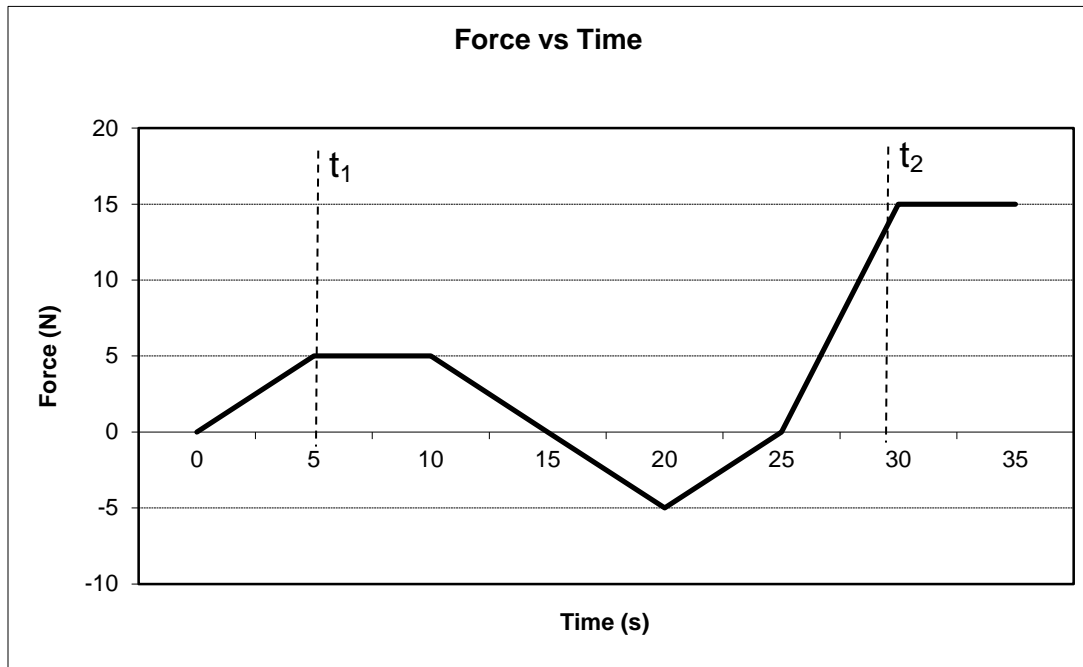


Momentum & Impulse

Name: _____ Date: _____

1. A 15kg object has the following time variant force $F(t)$ acting on it.



The object has a final velocity, $v(t_2)$, of 20m/s . Determine

- a) The impulse from t_1 to t_2 .

b) The average force over the time interval indicated in a)

c) The initial velocity of the object at t_1 .

2. A $5g$ bullet is fired through a piece of wood. It enters the wood at $500m/s$ and exits at $320m/s$. The wood exerted an average force of $1000N$ on the bullet.

a) Draw a well labelled diagram and state the given information..

b) Determine the change in momentum.

c) Determine how long the bullet was in the wood for.

d) Determine how thick the piece of wood is.