

WS3

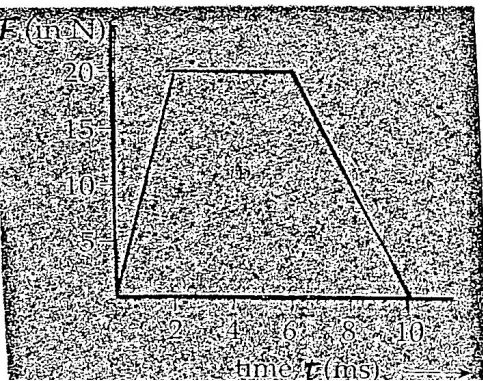
Name _____ # _____ Date _____ Score _____

Honors Impulse and Momentum Review

1. The ballistic pendulum was used to measure the speeds of bullets before electronic timers. What is the speed of the bullet just prior to the collision if the mass of the bullet is m and the mass of the hanging block is M . The block rises a maximum vertical distance h after the collision? Draw a picture.

$$V_{\text{bullet}} = \frac{M + M}{m} \sqrt{2gh}$$

2. A small block of mass $m = 0.07 \text{ kg}$, initially at rest, is struck by an impulse since force F of duration 10 ms whose strength varies with time according to the following graph. What is the resulting speed of the block?



20 m/s