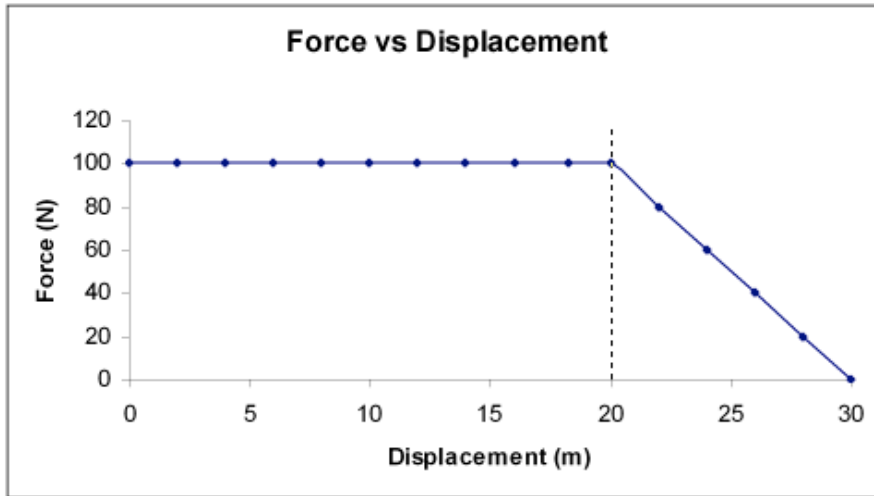


Name: \_\_\_\_\_

Class Period: \_\_\_\_\_

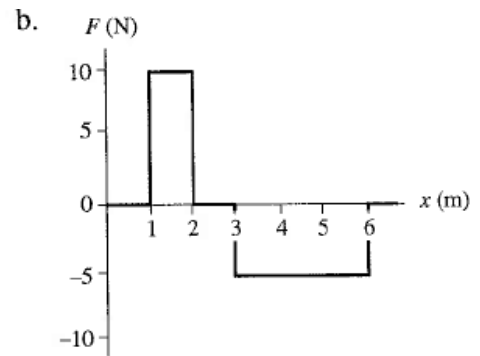
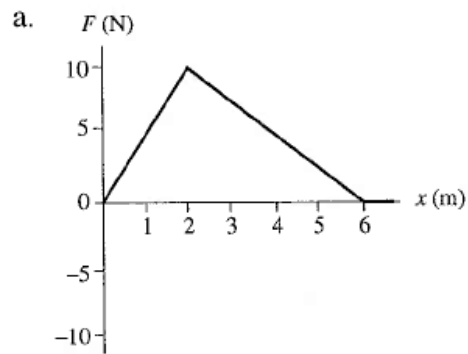
**Physics: Work, Power, and Energy**  
**Work Done by a Variable Force Homework**



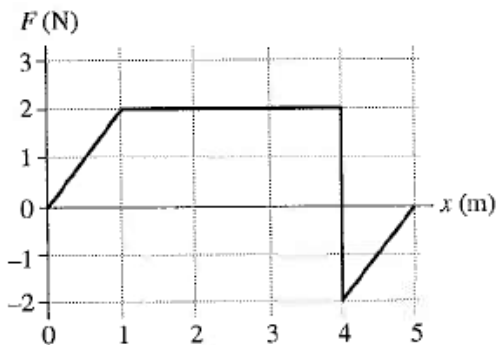
The graph above shows the force applied to a 5.00 kg object beginning from rest.

1. How much work was done by this force through the first 20.0 meters?
2. How much work was done by this force from  $x = 20.0$  m to  $x = 30.0$  m?
3. What is the acceleration of the object during the first 20.0 m?
4. If the object began from rest and moved 20.0 m under the acceleration given in question 3, what is the final velocity of the object?

5. A small particle moving along the x-axis experiences the forces shown in the graphs below. How much work does each force do on the particle?



6. A 1.00 kg particle is moving along the x-axis and experiences the forces shown.



- A. How much work is done by these forces during the first 3 meters?

- B. How much work is done overall during the entire 5.0 m?