

Assume the position

The only force acting on a 2.0 kg block moving in the x-y plane has a magnitude of 5.0 N. The block initially has a velocity of 4.0 m/s in the positive x direction. Some time later, the block has a velocity of 6.0 m/s in the negative x direction.

How much work is done on the block by the 5.0 N force during this time?