3. In the diagram below, 400. joules of work is done raising a 72-newton weight a vertical distance of 5.0 meters.
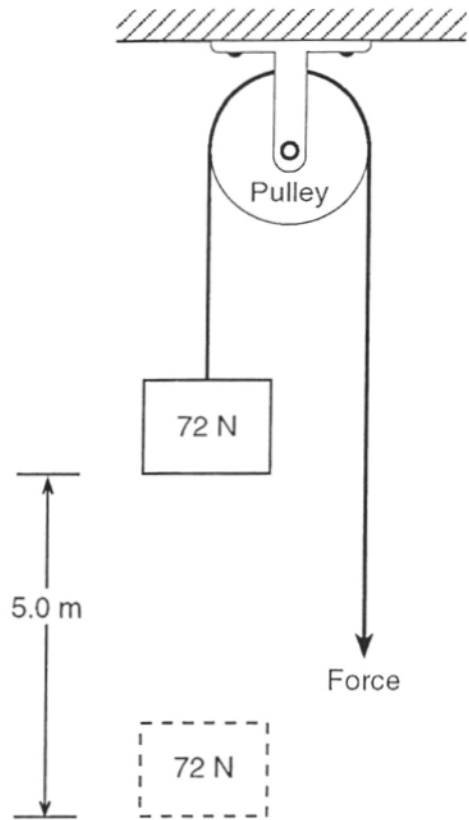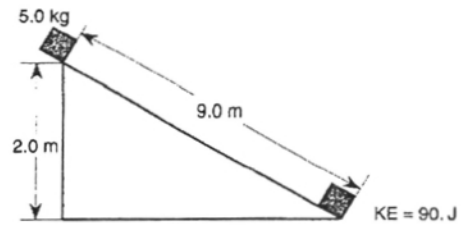

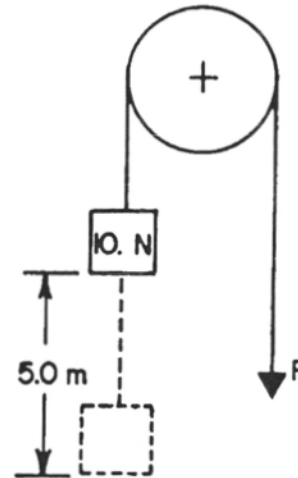Pulley

72 N

5.0 m

Force

72 N

How much work is done to overcome friction as the weight is raised?

9. The diagram below shows a 5.0-kilogram mass sliding 9.0 meters down an incline from a height of 2.0 meters in 3.0 seconds. The object gains 90. joules of kinetic energy while sliding.

5.0 kg

9.0 m

2.0 m

KE = 90. J

How much work is done against friction as the mass slides the 9.0 meters?

10. In the diagram below, 55 joules of work is needed to raise a 10.-newton weight 5.0 meters.

10. N

5.0 m

F

How much work is done to overcome friction as the weight is raised?