Tutorial 5

Exercises 1

A (10kg) object is pulled along a horizontal frictionless surface as shown (fig1), if the object is moved a distance (d=4m). Find the work done by the force (F=25N)

Exercises 2

A force (F= 100N) is applied to an object (m=10kg), if the object is moved a distance (d= 10m) on a rough horizontal surface (μ_d = 0.1) as shown (fig1). Find the work done by the frictional force in units of Joule.

Exercises 3

A force $\vec{F}$= -15$\hat{j}$ (N) acts on a particle as it moves forms the origin to the point (3$\hat{i}$+3$\hat{j}$-$\hat{k}$)m. How much work is done by the given force during this?

Exercises 4

When a net force acts on a 2kg mass, the mass changes its velocity from $\vec{Vi}$= 2$\hat{i}$-3$\hat{j}$ (m/s) to $\vec{V}_f$ = $\hat{i}$ − 5$\hat{j}$ (m/s) what is the net work done by this force?