1. ENERGY AND POWER USING MATLAB

CODE:

close all;

clear all;

clc;

tmax=10;

tmin=-10;

dt=0.01;

t0=10;

t=tmin:dt:tmax;

x= 10\* (sin(10\*pi\*t));

xsq= x.^2;

E= trapz(t,xsq);

P= E/(2\*t0);

disp(['Energy, E= ', num2str(E), 'joules']);

disp(['Power,P= ',num2str(P), 'Watts']);

OUTPUT:

Energy, E= 1000joules  
Power,P= 50Watts