% this script loops through 10 square sizes, calculates some features, and

% graphs them

close all

clear variables

sqr\_sizes = linspace(1,10,12)

for i=1:length(sqr\_sizes)

s = sqr\_sizes(i);

vv = test\_fun(s);

list\_of\_areas(i) = vv(2);

list\_of\_perim(i) = vv(3);

end

plot( sqr\_sizes,list\_of\_areas,'r-')

hold on

plot( sqr\_sizes,list\_of\_perim,'b-');

function [ outvec ] = test\_fun( x )

% x is the side length of a square

% return a vector outvec with elements [ hypot area perimeter ]

hyp = sqrt(2) \* x;

area = x^2;

perim = 4\*x;

outvec = [ hyp area perim ];

