clc

clear

format compact

format short g

disp('Problem: 1')

x = input(‘Please enter three angles in [x x x] format:’);

for i = 1:3

%Computes the left and right hand sides of each identity and their difference

LHSa = tand(4\*x(i));

RHSa = (4\*tand(x(i))-4\*tand(x(i))^3)/(1-6\*tand(x(i))^2+tand(x(i))^4);

diffa = LHSa - RHSa;

LHSb = sind(x(i))^3;

RHSb = (1/4)\*(3\*sind(x(i))-sind(3\*x(i)));

diffb = LHSb-RHSb;

%Displays results

fprintf('\nFor part (a): RHS = %3.5f LHS = %3.5f difference %3.5f',LHSa, RHSa, diffa)

fprintf('\nFor part (b): RHS = %3.5f LHS = %3.5f difference %3.5f',LHSb, RHSb, diffb)

end

disp(‘Problem: 2’)

m = input(‘Please enter three values for n, the number of terms, in [x x x] format: ‘)

for i = 1:3

n = [0:m(i)];

%Calculate each element and the sum total difference with pi

elements = (-3).^((-1)\*n)./(2\*n+1);

diff = sqrt(12)\*sum(elements)-pi;

%Display result

fprintf('\nn: %.i difference: %3.15f',m(i),diff)

end

Ask the user for an integer, m. Then use a for loop to create a row array with m elements

consisting of all the integers from 1 to m. Use disp to display the resulting array. For m use 15.

disp(‘Problem 3’)

m = input(‘Please enter an integer: ‘)

x = zeros(1,m);

for i = 1:m

x(i) = i;

end

disp(x)

disp('Problem 4')

%Round down m/3 to find the size of the new array

k = floor(m/3);

for i = 1:k

y(i) = x(3\*i);

end

disp(y)