**LAB 6**

**%rms value**

as = []

prompt = {'Enter the number of numbers'}

title = 'Number'

answer = inputdlg(prompt,title)

n = str2num(answer{1});

prompt2 = {'Enter the number'}

title2 = 'Numbers'

r = [];

for i = 1:n

answer2 = inputdlg(prompt2,title2);

v = str2num(answer2{1});

r(1,i) = v;

%clear answer2

%clear v

end

disp(r)

rms(r,n)

function [] = rms(r,n)

sum = 0;

for i = 1:n

sum = sum+(r(1,i))^2;

%disp(sum)

end

r\_m\_s = sqrt((sum)\*(1/n));

disp('rms is')

disp(r\_m\_s)

end

as =

[]

prompt =

1×1 cell array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 cell array

{'5'}

prompt2 =

1×1 cell array

{'Enter the number'}

title2 =

'Numbers'

1 2 3 4 5

rms is

3.3166

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**%arithmetic mean**

as = []

prompt = {'Enter the number of numbers'}

title = 'Number'

answer = inputdlg(prompt,title)

n = str2num(answer{1});

prompt2 = {'Enter the number'}

title2 = 'Numbers'

r = [];

for i = 1:n

answer2 = inputdlg(prompt2,title2);

v = str2num(answer2{1});

r(1,i) = v;

%clear answer2

%clear v

end

disp(r)

avg(r,n)

function [] = avg(r,n)

sum = 0;

for i = 1:n

sum = sum+r(1,i);

%disp(sum)

end

amean = sum/n;

disp('arithmetic mean is')

disp(amean)

end

as =

[]

prompt =

1×1 cell array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 cell array

{'5'}

prompt2 =

1×1 cell array

{'Enter the number'}

title2 =

'Numbers'

1 2 3 4 5

arithmetic mean is

3

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**%geometric mean**

as = []

prompt = {'Enter the number of numbers'}

title = 'Number'

answer = inputdlg(prompt,title)

n = str2num(answer{1});

prompt2 = {'Enter the number'}

title2 = 'Numbers'

r = [];

for i = 1:n

answer2 = inputdlg(prompt2,title2);

v = str2num(answer2{1});

r(1,i) = v;

%clear answer2

%clear v

end

disp(r)

g\_mean(r,n)

function [] = g\_mean(r,n)

mul = 1;

for i = 1:n

mul = mul\*r(1,i);

%disp(sum)

end

gmean = (mul)^(1/n);

disp('geometric mean is')

disp(gmean)

end

as =

[]

prompt =

1×1 cell array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 cell array

{'5'}

prompt2 =

1×1 cell array

{'Enter the number'}

title2 =

'Numbers'

1 2 3 4 5

geometric mean is

2.6052

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**%harmonic mean**

as = []

prompt = {'Enter the number of numbers'}

title = 'Number'

answer = inputdlg(prompt,title)

n = str2num(answer{1});

prompt2 = {'Enter the number'}

title2 = 'Numbers'

r = [];

for i = 1:n

answer2 = inputdlg(prompt2,title2);

v = str2num(answer2{1});

r(1,i) = v;

%clear answer2

%clear v

end

disp(r)

h\_mean(r,n)

function [] = h\_mean(r,n)

sum = 0;

for i = 1:n

sum = sum+1/(r(1,i));

%disp(sum)

end

hmean = n/sum;

disp('Harmonic mean is')

disp(hmean)

end

as =

[]

prompt =

1×1 cell array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 cell array

{'5'}

prompt2 =

1×1 cell array

{'Enter the number'}

title2 =

'Numbers'

1 2 3 4 5

Harmonic mean is

2.1898

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**LAB 7**

**%function to find out if number odd or even**

prompt = {'Enter the number'};

title = 'Number';

answer = inputdlg(prompt,title)

n=str2num(answer{1});

number(n)

function [result] = number(n)

if rem(n,2)==0

disp('number is even')

else

disp('number is odd')

end

end

answer =

1×1 cell array

{'6'}

number is even

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**%solution of a quadratic equation**

%quadratic equation is of the form Ax2+Bx+c

%x=(-b+-(sqrt(b\*\*2-4\*a\*c)))/2a

disp('quadratic equation is of the form Ax2+Bx+C')

prompt = {'Enter the value of A','Enter the value of B','Enter the value of C'}

title = 'Constants'

answer = inputdlg(prompt,title)

a=str2num(answer{1});

b=str2num(answer{2});

c=str2num(answer{3});

d=(b^2-(4\*a\*c))

solution(a,b,c,d)

function [] = solution(a,b,c,d)

disp('the value of x1 is')

x1 = (-b+(sqrt(d)))/2\*a;

disp(x1)

disp('the value of x2 is')

x2 = (-b-(sqrt(d)))/2\*a;

disp(x2)

end

quadratic equation is of the form Ax2+Bx+C

prompt =

1×3 cell array

{'Enter the value …'} {'Enter the value …'} {'Enter the value …'}

title =

'Constants'

answer =

3×1 cell array

{'4'}

{'5'}

{'2'}

d =

-7

the value of x1 is

-10.0000 + 5.2915i

the value of x2 is

-10.0000 - 5.2915i

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