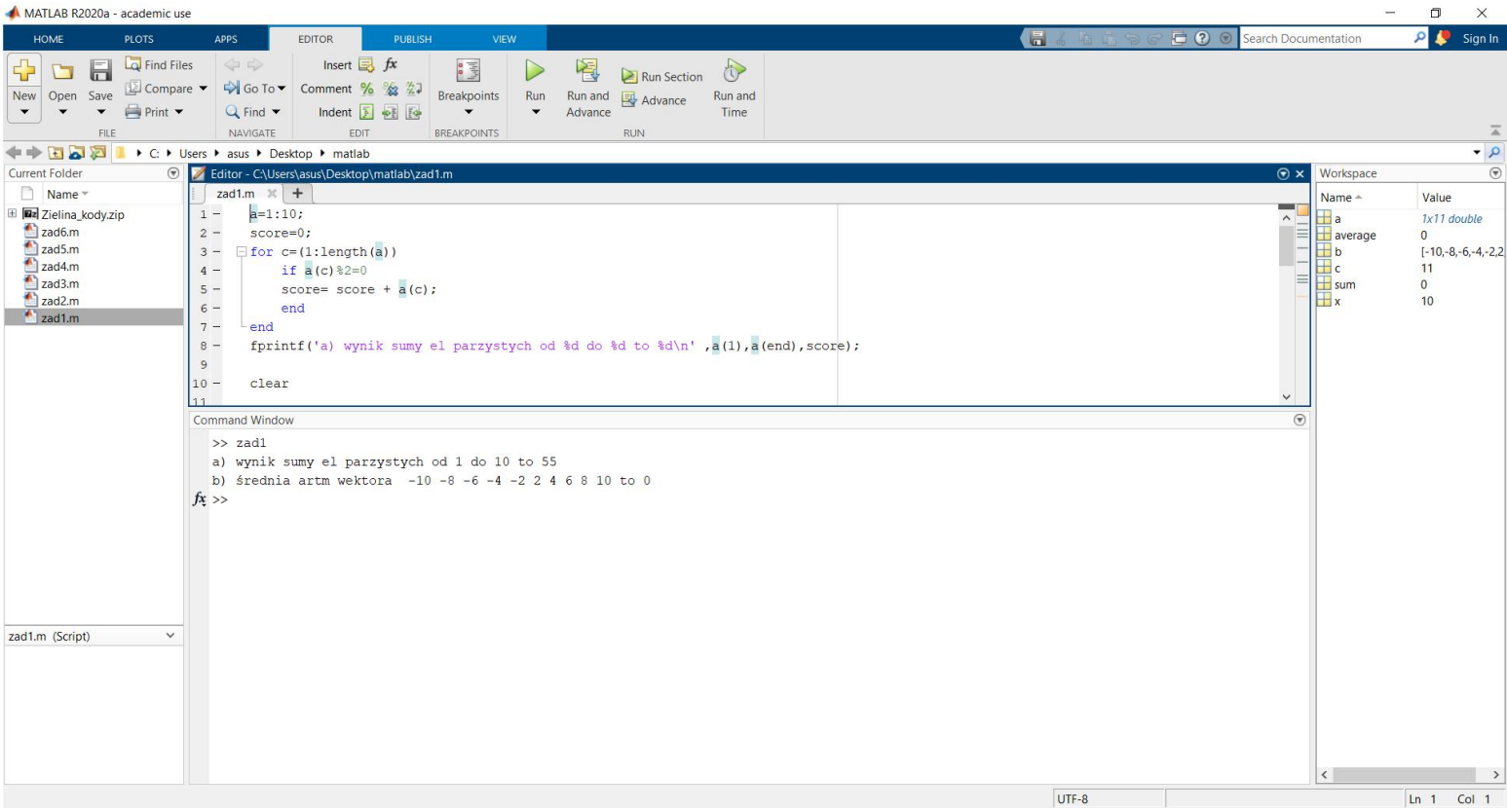
Zad1

a)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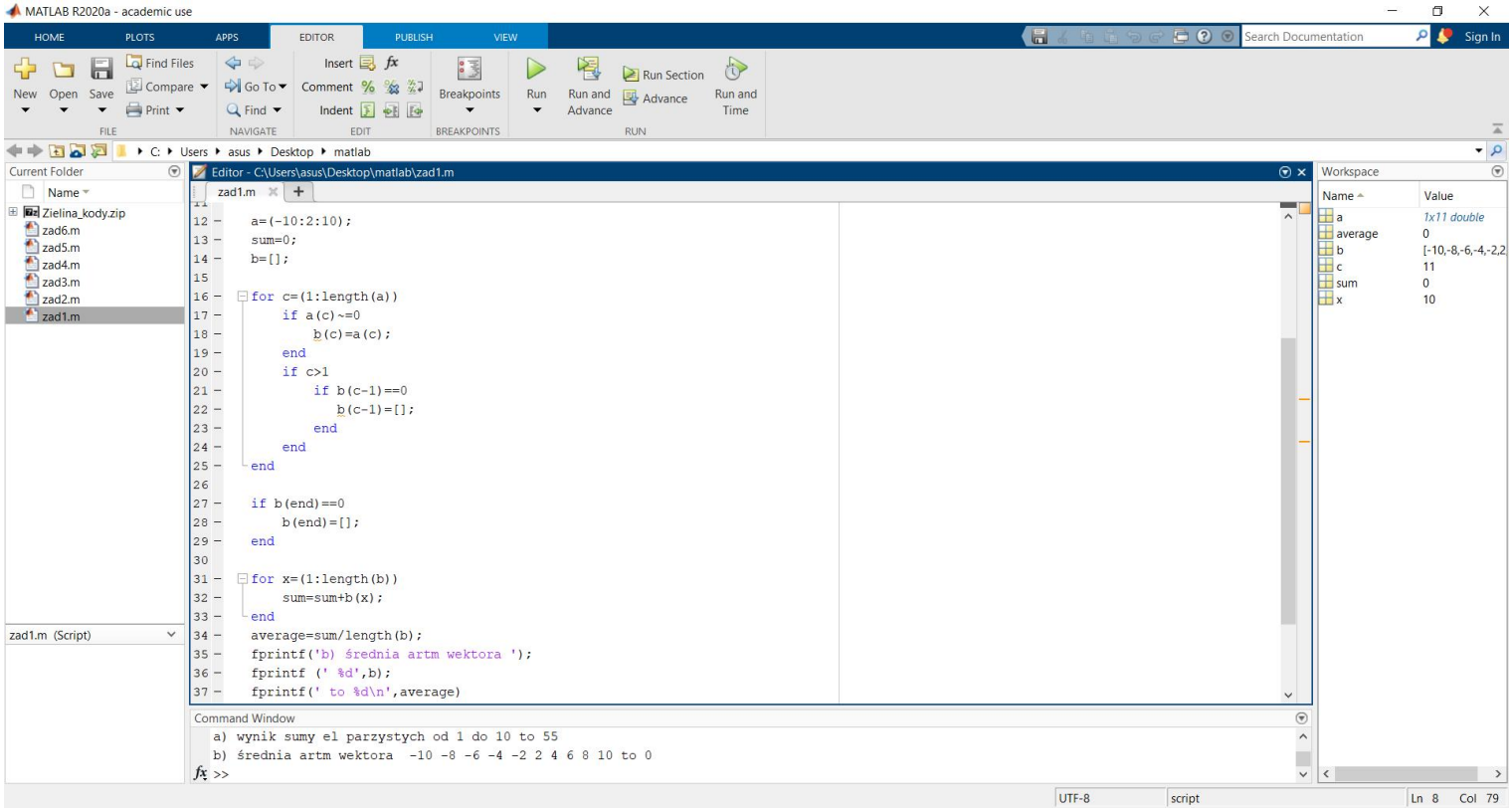
Breakpoints
Run Run and Advance Run Section Advance Run and Time
FILE NAVIGATE EDIT BREAKPOINTS RUN
C: Users asus Desktop matlab
Current Folder
Name
Zielina_kody.zip
zad6.m
zad5.m
zad4.m
zad3.m
zad2.m
zad1.m
zad1.m (Script)
Editor - C:\Users\asus\Desktop\matlab\zad1.m
zad1.m
1 a=1:10;
2 score=0;
3 for c=(1:length(a))
4 if a(c)%2=0
5 score= score + a(c);
6 end
7 end
8 fprintf('a) wynik sumy el parzystych od %d do %d to %d\n' ,a(1),a(end),score);
9
10 clear
11
Command Window
>> zad1
a) wynik sumy el parzystych od 1 do 10 to 55
b) średnia artm wektora -10 -8 -6 -4 -2 2 4 6 8 10 to 0
fx >>
Workspace
Name Value
a 1x11 double
average 0
b [-10,-8,-6,-4,-2,2
c 11
sum 0
x 10
UTF-8
Ln 1 Col 1

b)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C: Users asus Desktop matlab
Current Folder
Name
Zielina_kody.zip
zad6.m
zad5.m
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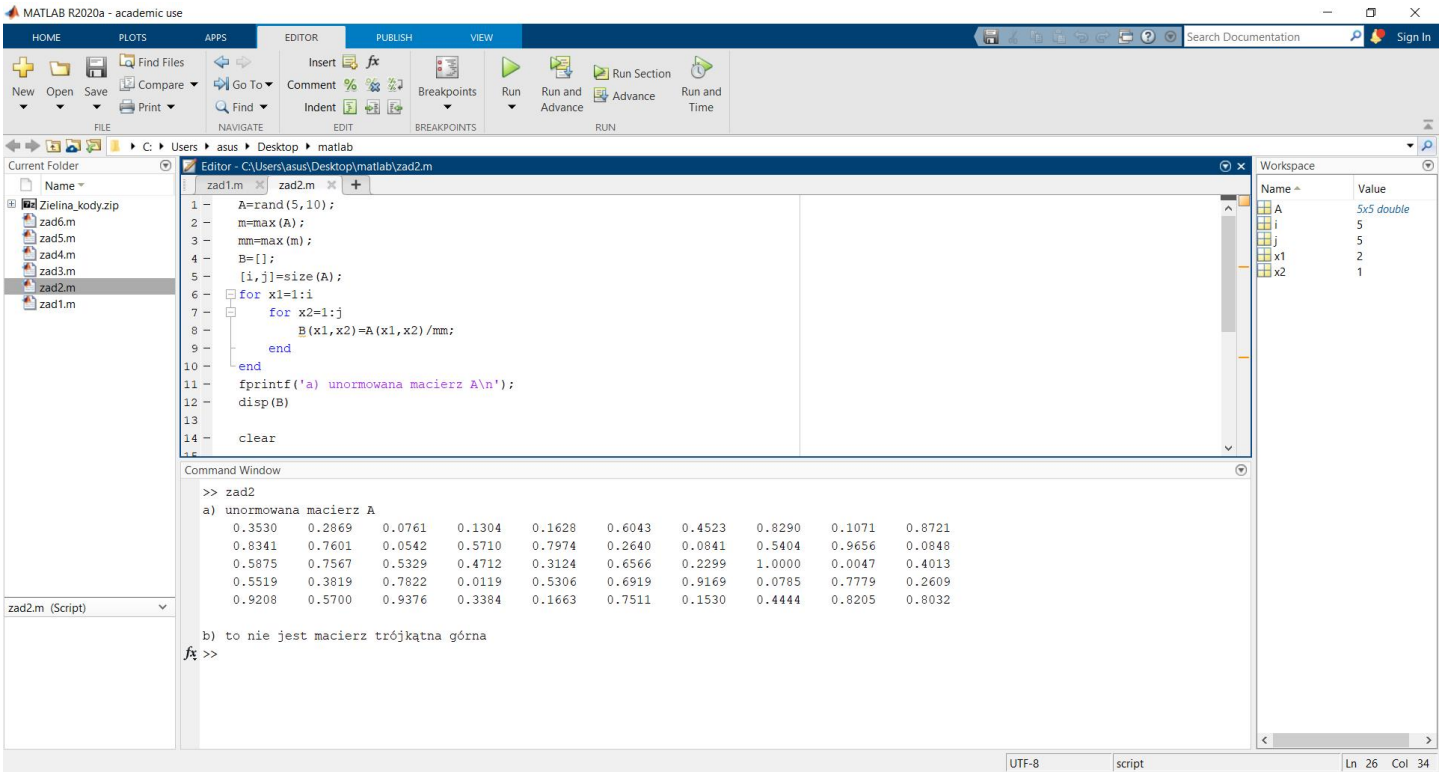
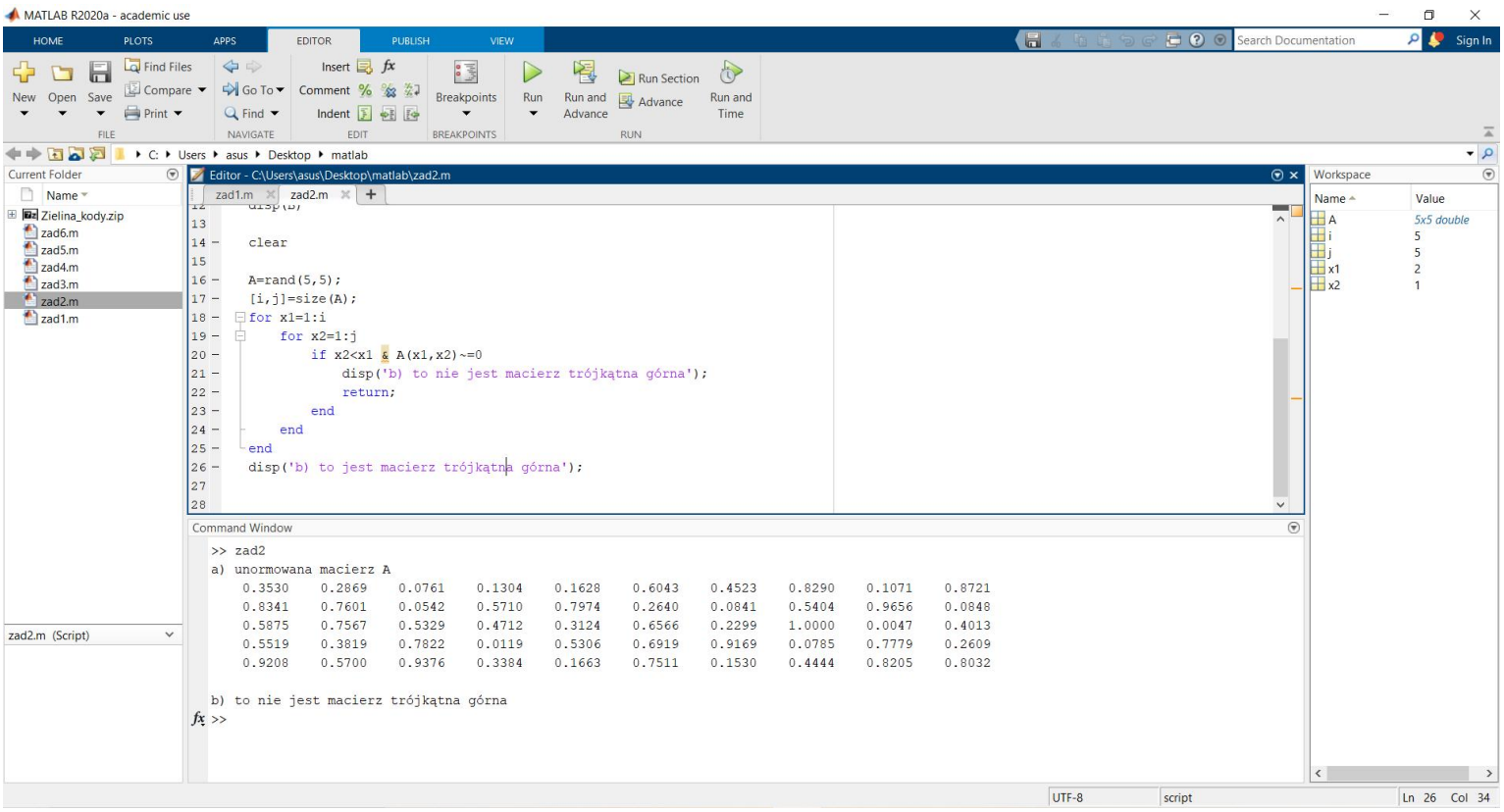
zad3.m
zad2.m
zad1.m
zad1.m (Script)
Editor - C:\Users\asus\Desktop\matlab\zad1.m
zad1.m
12 a=(-10:2:10);
13 sum=0;
14 b=[];
15
16 for c=(1:length(a))
17 if a(c)~=0
18 b(c)=a(c);
19 end
20 if c>1
21 if b(c-1)==0
22 b(c-1)=[];
23 end
24 end
25 end
26
27 if b(end)==0
28 b(end)=[];
29 end
30
31 for x=(1:length(b))
32 sum=sum+b(x);
33 end
34 average=sum/length(b);
35 fprintf('b) średnia artm wektora ');
36 fprintf (' %d',b);
37 fprintf(' to %d\n',average)
Command Window
a) wynik sumy el parzystych od 1 do 10 to 55
b) średnia artm wektora -10 -8 -6 -4 -2 2 4 6 8 10 to 0
fx >>
Workspace
Name Value
a 1x11 double
average 0
b [-10,-8,-6,-4,-2,2
c 11
sum 0
x 10
UTF-8 script Ln 8 Col 79

zad2

a)


MATLAB R2020a - academic use
C: Users asus Desktop matlab
Current Folder
Zielina_kody.zip
zad6.m
zad5.m
zad4.m
zad3.m
zad2.m
zad1.m
Editor - C:\Users\asus\Desktop\matlab\zad2.m
zad1.m
zad2.m
A=rand(5,10);
m=max(A);
mm=max(m);
B=[];
[i,j]=size(A);
for x1=1:i
for x2=1:j
B(x1,x2)=A(x1,x2)/mm;
end
end
fprintf('a) unormowana macierz A\n');
disp(B)
clear
Command Window
>> zad2
a) unormowana macierz A
0.3530 0.2869 0.0761 0.1304 0.1628 0.6043 0.4523 0.8290 0.1071 0.8721
0.8341 0.7601 0.0542 0.5710 0.7974 0.2640 0.0841 0.5404 0.9656 0.0848
0.5875 0.7567 0.5329 0.4712 0.3124 0.6566 0.2299 1.0000 0.0047 0.4013
0.5519 0.3819 0.7822 0.0119 0.5306 0.6919 0.9169 0.0785 0.7779 0.2609
0.9208 0.5700 0.9376 0.3384 0.1663 0.7511 0.1530 0.4444 0.8205 0.8032
b) to nie jest macierz trójkątna górna
>>
Workspace
Name Value
A 5x5 double
i 5
j 5
x1 2
x2 1
zad2.m (Script)
UTF-8 script Ln 26 Col 34

b)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Current Folder
Zielina_kody.zip
zad6.m
zad5.m
zad4.m
zad3.m
zad2.m
zad1.m
Editor - C:\Users\asus\Desktop\matlab\zad2.m
zad1.m
zad2.m
clear
A=rand(5,5);
[i,j]=size(A);
for x1=1:i
for x2=1:j
if x2<x1 & A(x1,x2)~=0
disp('b) to nie jest macierz trójkątna górna');
return;
end
end
end
disp('b) to jest macierz trójkątna górna');
Command Window
>> zad2
a) unormowana macierz A
0.3530 0.2869 0.0761 0.1304 0.1628 0.6043 0.4523 0.8290 0.1071 0.8721
0.8341 0.7601 0.0542 0.5710 0.7974 0.2640 0.0841 0.5404 0.9656 0.0848
0.5875 0.7567 0.5329 0.4712 0.3124 0.6566 0.2299 1.0000 0.0047 0.4013
0.5519 0.3819 0.7822 0.0119 0.5306 0.6919 0.9169 0.0785 0.7779 0.2609
0.9208 0.5700 0.9376 0.3384 0.1663 0.7511 0.1530 0.4444 0.8205 0.8032
b) to nie jest macierz trójkątna górna
>>
Workspace
Name Value
A 5x5 double
i 5
j 5
x1 2
x2 1
zad2.m (Script)
UTF-8 script Ln 26 Col 34

zad3

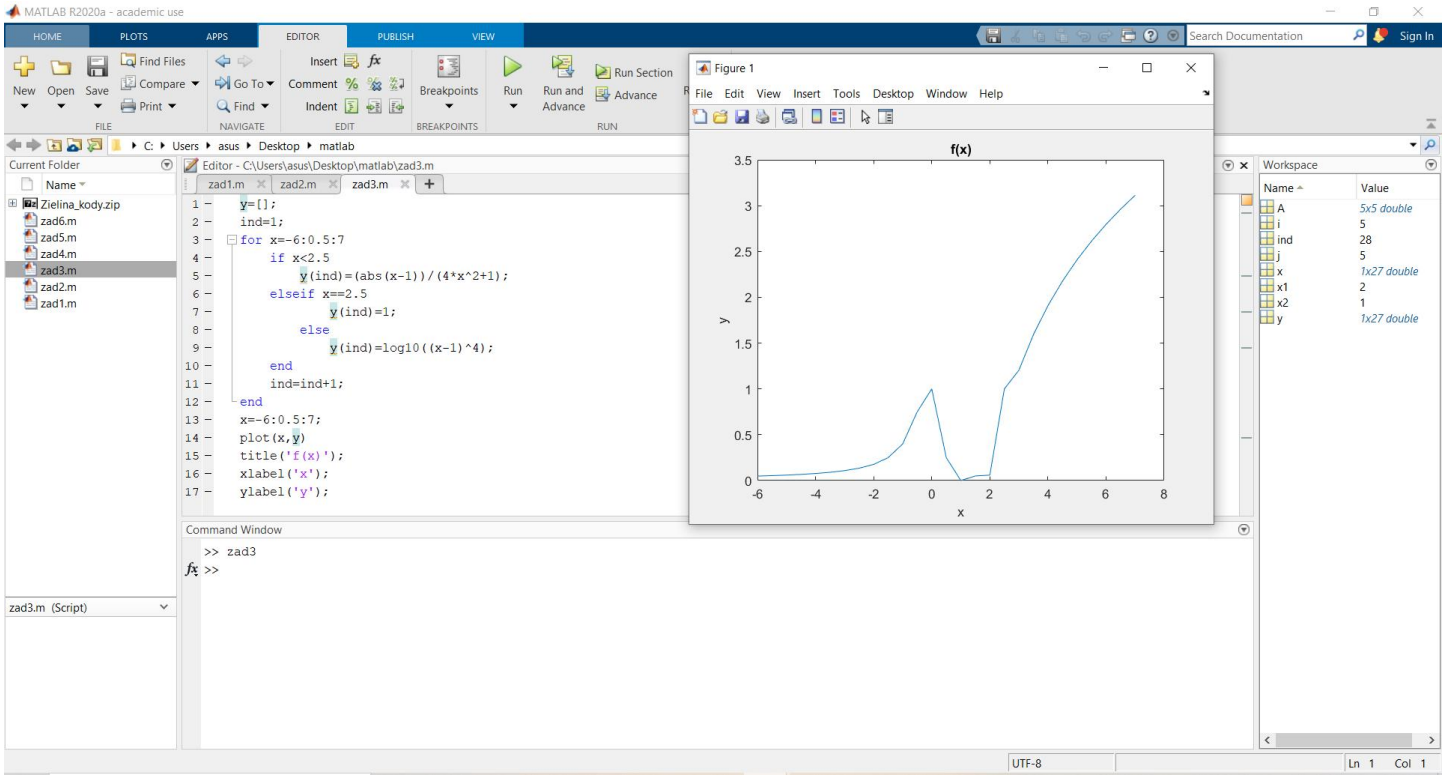
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Figure 1
f(x)
Editor - C:\Users\asus\Desktop\matlab\zad3.m
zad1.m
zad2.m
zad3.m
y=[];
ind=1;
for x=-6:0.5:7
if x<2.5
y(ind)=(abs(x-1))/(4*x^2+1);
elseif x==2.5
y(ind)=1;
else
y(ind)=log10((x-1)^4);
end
ind=ind+1;
end
x=-6:0.5:7;
plot(x,y)
title('f(x)');
xlabel('x');
ylabel('y');
Command Window
>> zad3
>>

zad4

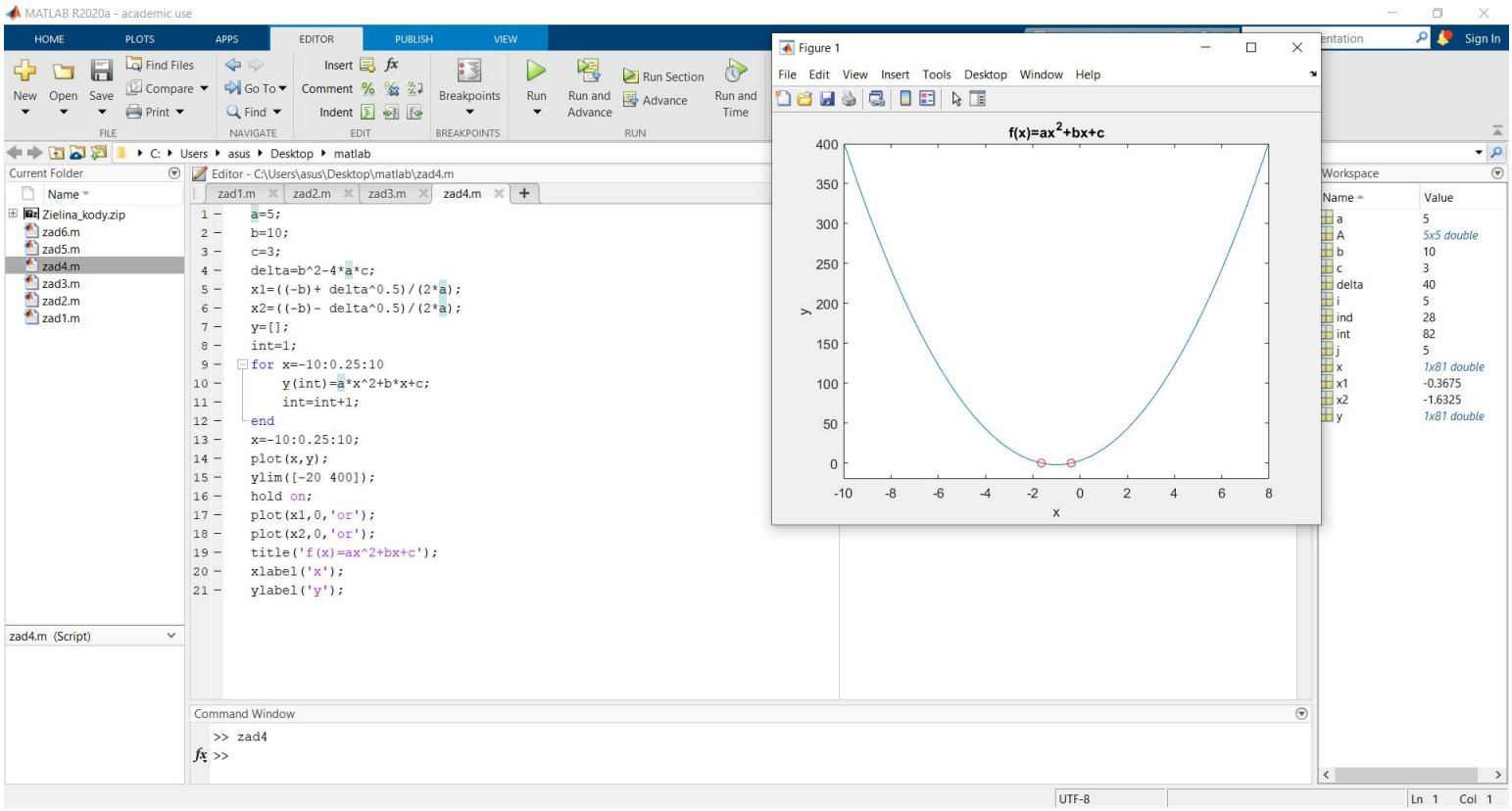
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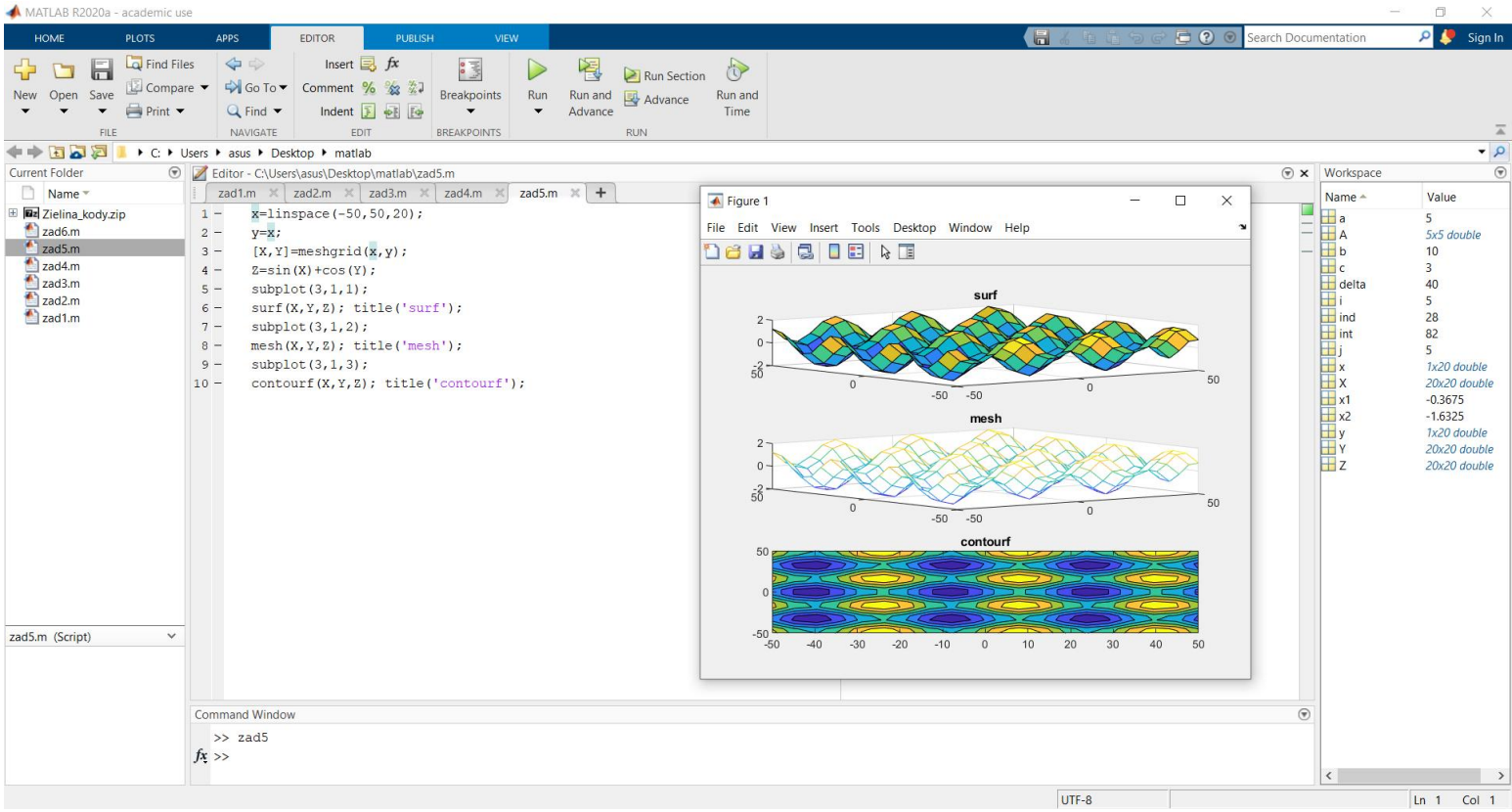
Figure 1
f(x)=ax2+bx+c
Editor - C:\Users\asus\Desktop\matlab\zad4.m
zad1.m
zad2.m
zad3.m
zad4.m
a=5;
b=10;
c=3;
delta=b^2-4*a*c;
x1=((-b)+ delta^0.5)/(2*a);
x2=((-b)- delta^0.5)/(2*a);
y=[];
int=1;
for x=-10:0.25:10
y(int)=a*x^2+b*x+c;
int=int+1;
end
x=-10:0.25:10;
plot(x,y);
ylim([-20 400]);
hold on;
plot(x1,0,'or');
plot(x2,0,'or');
title('f(x)=ax^2+bx+c');
xlabel('x');
ylabel('y');
Command Window
>> zad4
>>

zad5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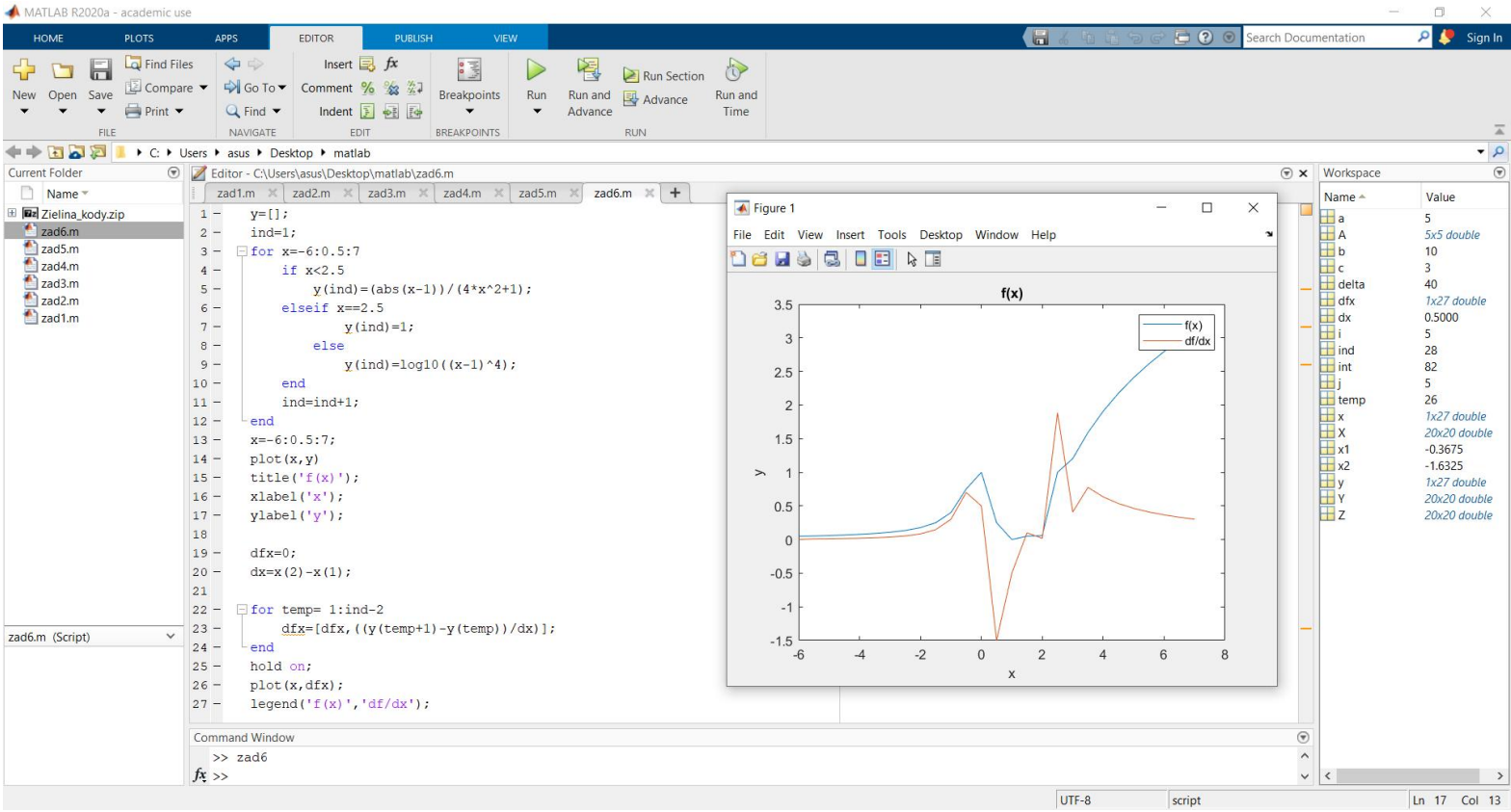
zad4.m
zad3.m
zad2.m
zad1.m
zad5.m (Script)
Editor - C:\Users\asus\Desktop\matlab\zad5.m
zad1.m zad2.m zad3.m zad4.m zad5.m
1 x=linspace(-50,50,20);
2 y=x;
3 [X,Y]=meshgrid(x,y);
4 Z=sin(X)+cos(Y);
5 subplot(3,1,1);
6 surf(X,Y,Z); title('surf');
7 subplot(3,1,2);
8 mesh(X,Y,Z); title('mesh');
9 subplot(3,1,3);
10 contourf(X,Y,Z); title('contourf');
Figure 1
File Edit View Insert Tools Desktop Window Help
surf
mesh
contourf
Workspace
Name Value
a 5
A 5x5 double
b 10
c 3
delta 40
i 5
ind 28
int 82
j 5
x 1x20 double
X 20x20 double
x1 -0.3675
x2 -1.6325
y 1x20 double
Y 20x20 double
Z 20x20 double
Command Window
>> zad5
>>
UTF-8
Ln 1 Col 1

zad6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zad3.m
zad2.m
zad1.m
zad6.m (Script)
Editor - C:\Users\asus\Desktop\matlab\zad6.m
zad1.m zad2.m zad3.m zad4.m zad5.m zad6.m
1 y=[];
2 ind=1;
3 for x=-6:0.5:7
4 if x<2.5
5 y(ind)=(abs(x-1))/(4*x^2+1);
6 elseif x==2.5
7 y(ind)=1;
8 else
9 y(ind)=log10((x-1)^4);
10 end
11 ind=ind+1;
12 end
13 x=-6:0.5:7;
14 plot(x,y)
15 title('f(x)');
16 xlabel('x');
17 ylabel('y');
18
19 dfx=0;
20 dx=x(2)-x(1);
21
22 for temp= 1:ind-2
23 dfx=[dfx,((y(temp+1)-y(temp))/dx)];
24 end
25 hold on;
26 plot(x,dfx);
27 legend('f(x)','df/dx');
Figure 1
File Edit View Insert Tools Desktop Window Help
f(x)
f(x)
df/dx
x
y
Workspace
Name Value
a 5
A 5x5 double
b 10
c 3
delta 40
dfx 1x27 double
dx 0.5000
i 5
ind 28
int 82
j 5
temp 26
x 1x27 double
X 20x20 double
x1 -0.3675
x2 -1.6325
y 1x27 double
Y 20x20 double
Z 20x20 double
Command Window
>> zad6
>>
UTF-8
script
Ln 17 Col 13