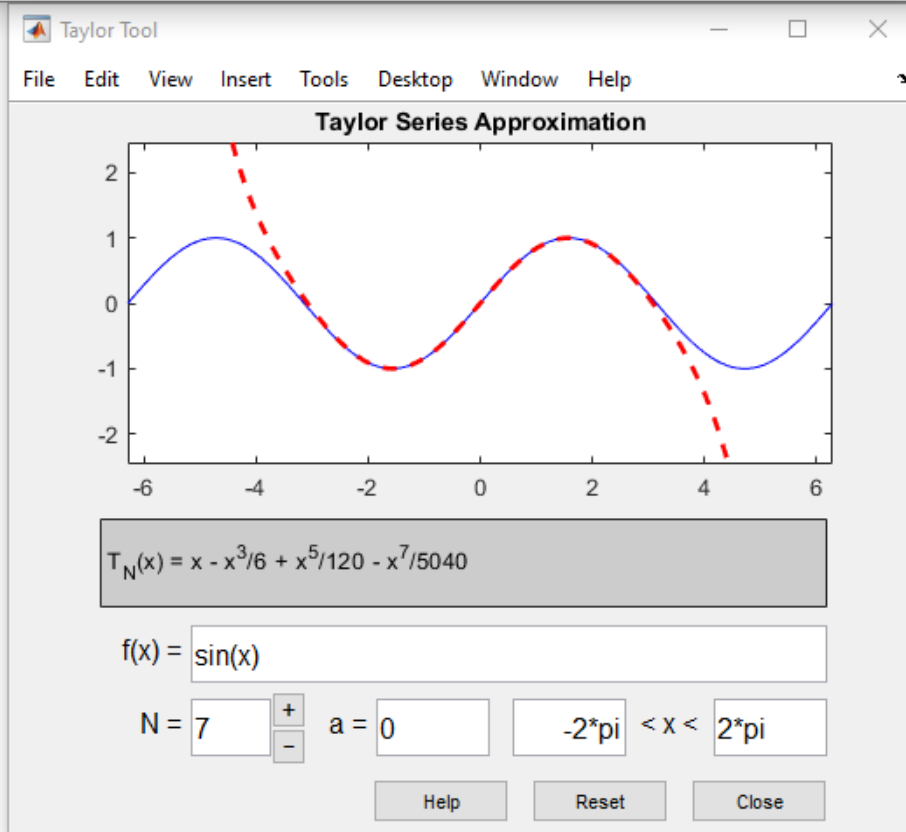
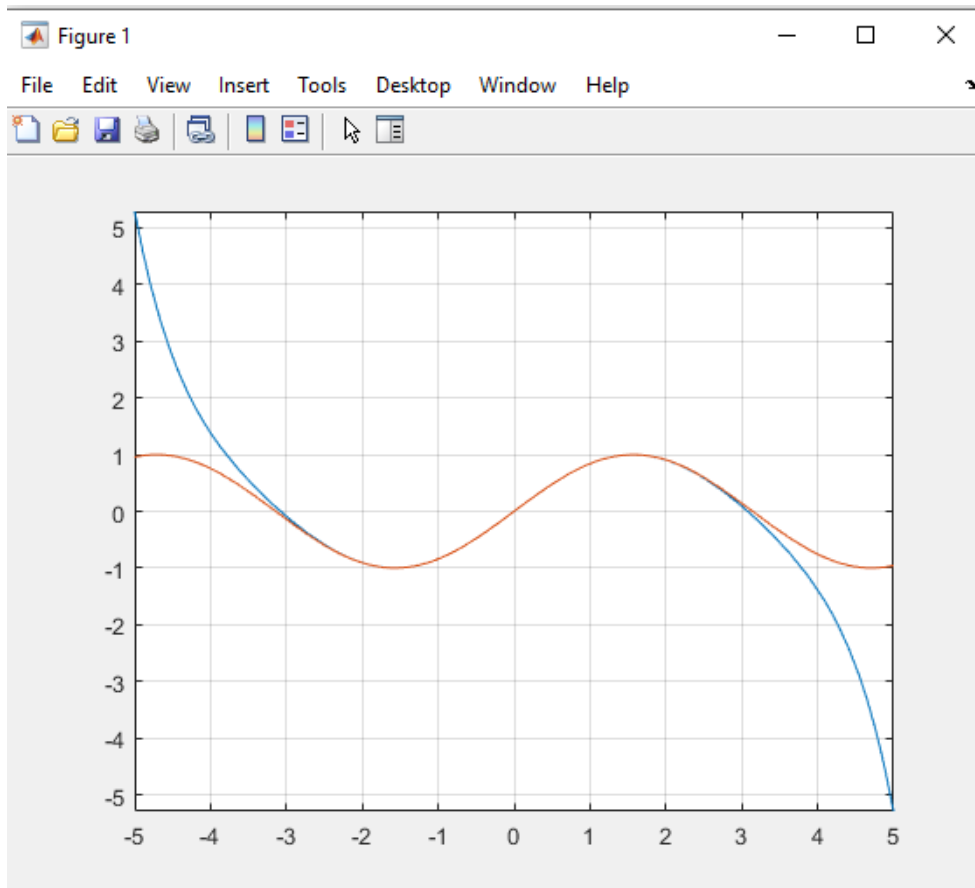
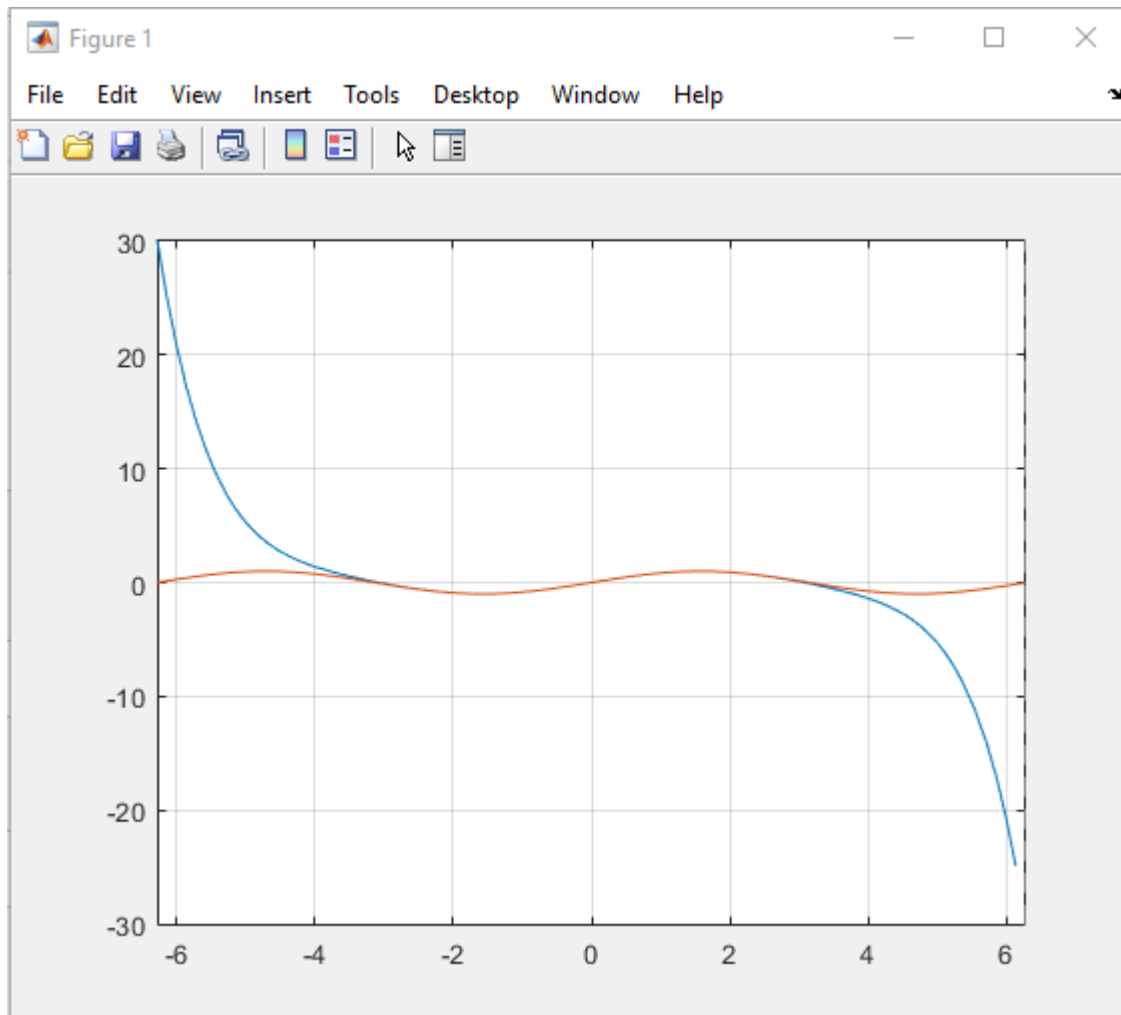


and this fixed the issue as shown in the third graph.

ECE 3040 Homework 1



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Question 10:



```
MATLAB R2021a - student use

HOME PLOTS APPS

New Script New Live Script New Open Find Files Import Data Save Workspace New Variable Open Variable Clear Workspace Favorites Run and Time Analyze Code Clear Commands

FILE VARIABLE CODE SIM

C:\Users\Alhamza313\Documents\MATLAB

Command Window

New to MATLAB? See resources for Getting Started.

>> power(sin(7*pi/8),2)

ans =

    0.1464

>> sin(7*pi/8).^2

ans =

    0.1464

>> (sin(7*pi/8)^2)

ans =

    0.1464

>> cos(5*pi/6) * sin^2(7*pi/8) + (tan(pi/6(ln(8)))/(sqrt(7)+2))
cos(5*pi/6) * sin^2(7*pi/8) + (tan(pi/6(ln(8)))/(sqrt(7)+2))
      ^
Invalid expression. When calling a function or indexing a variable, use parentheses. Other delimiters.

>> cos(5*pi/6) * sin(7*pi/8)^2 + (tan(pi/6(ln(8)))/(sqrt(7)+2))
cos(5*pi/6) * sin(7*pi/8)^2 + (tan(pi/6(ln(8)))/(sqrt(7)+2))
      ^
Invalid expression. When calling a function or indexing a variable, use parentheses. Other delimiters.

>> cos(5*pi/6) * sin(7*pi/8)^2 + (tan(pi/6(log(8)))/(sqrt(7)+2))
cos(5*pi/6) * sin(7*pi/8)^2 + (tan(pi/6(log(8)))/(sqrt(7)+2))
      ^
Invalid expression. When calling a function or indexing a variable, use parentheses. Other delimiters.

>> cos(5*pi/6) * sin(7*pi/8)^2 + (tan(pi/6(log(8)))/(sqrt(7)+2))
cos(5*pi/6) * sin(7*pi/8)^2 + (tan(pi/6(log(8)))/(sqrt(7)+2))
      ^
Invalid expression. When calling a function or indexing a variable, use parentheses. Other delimiters.

>> cos(5*pi/6) * sin(7*pi/8)^2 + (tan((pi/6)*(ln(8)))/(sqrt(7)+2))
Unrecognized function or variable 'ln'.

>> cos(5*pi/6) * sin(7*pi/8)^2 + (tan((pi/6)*(log(8)))/(sqrt(7)+2))

ans =

    0.2846

>> cos(5*pi/6) * sin(7*pi/8)^2 + (tan((pi/6)*(log(8)))/(sqrt(7)+2))

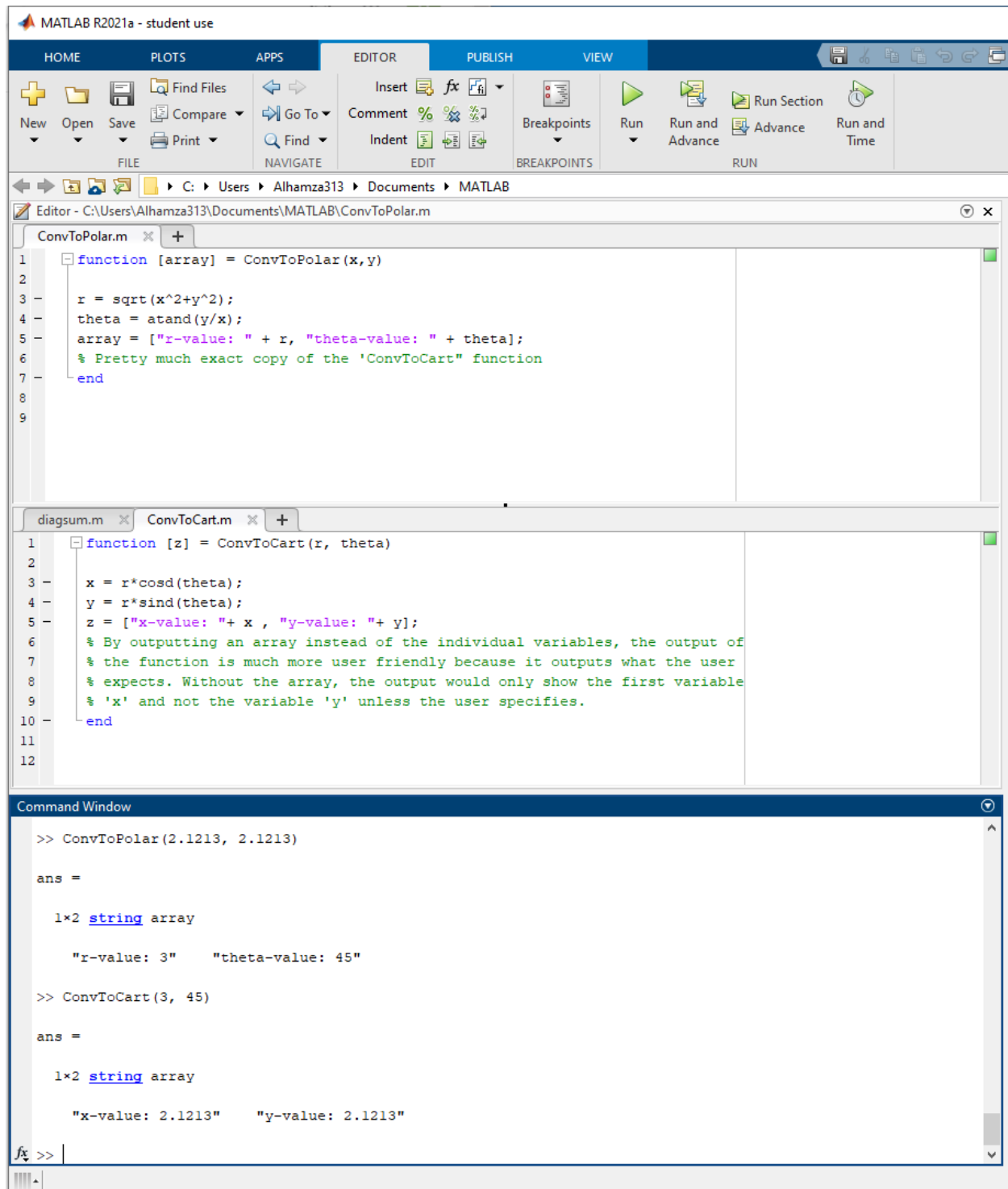
ans =

    0.2846

fx >> |
```

ECE 3040 Homework 1

Question 11:



The image shows the MATLAB R2021a - student use interface. The top toolbar includes tabs for HOME, PLOTS, APPS, EDITOR, PUBLISH, and VIEW. The EDITOR tab is active, showing two function files: ConvToPolar.m and ConvToCart.m. The Command Window at the bottom shows the execution of these functions.

```
function [array] = ConvToPolar(x,y)
r = sqrt(x^2+y^2);
theta = atand(y/x);
array = ["r-value: " + r, "theta-value: " + theta];
% Pretty much exact copy of the 'ConvToCart' function
end
```

```
function [z] = ConvToCart(r, theta)
x = r*cosd(theta);
y = r*sind(theta);
z = ["x-value: " + x, "y-value: " + y];
% By outputting an array instead of the individual variables, the output of
% the function is much more user friendly because it outputs what the user
% expects. Without the array, the output would only show the first variable
% 'x' and not the variable 'y' unless the user specifies.
end
```

Command Window

```
>> ConvToPolar(2.1213, 2.1213)

ans =

1x2 string array

    "r-value: 3"    "theta-value: 45"
```

```
>> ConvToCart(3, 45)

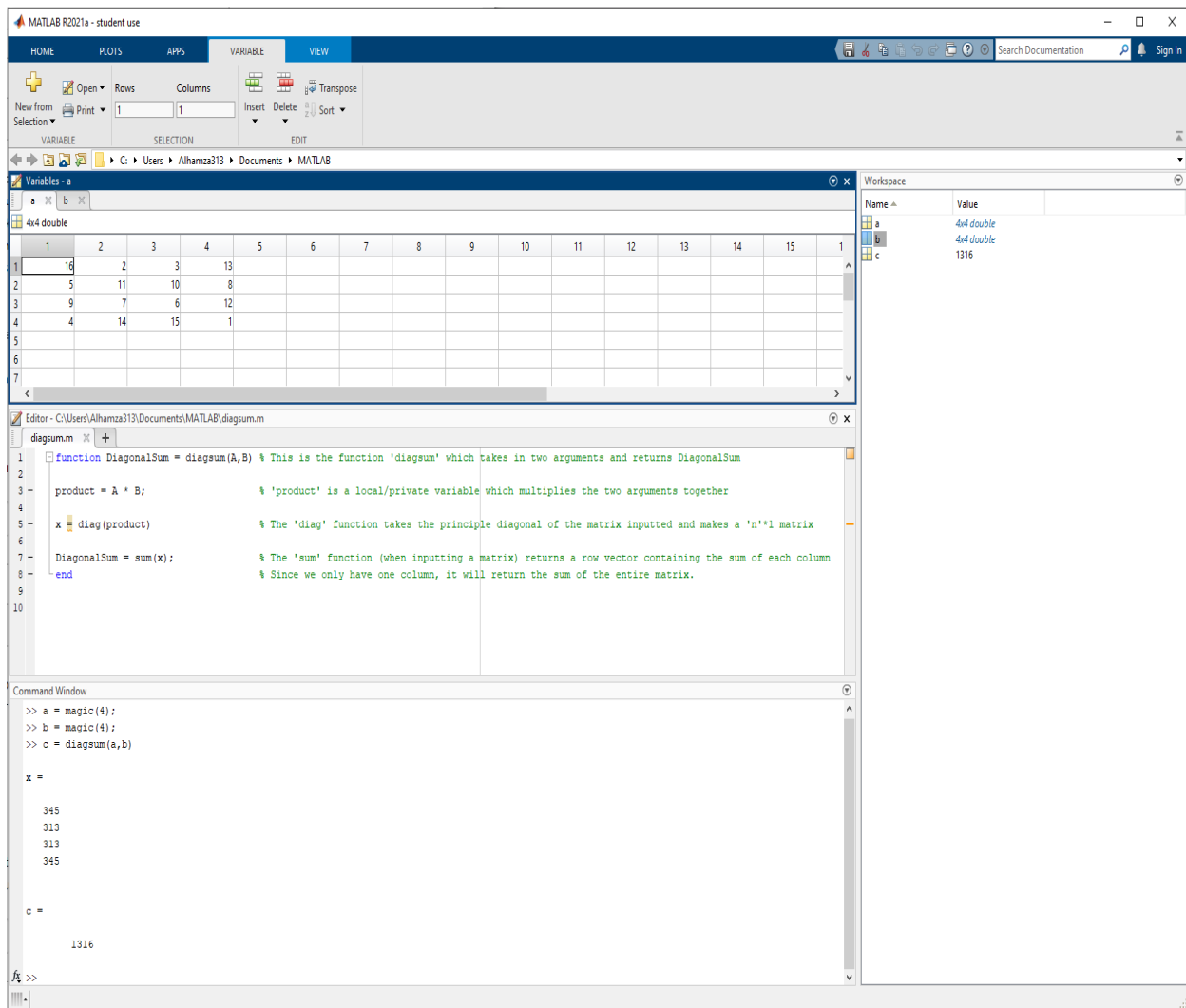
ans =

1x2 string array

    "x-value: 2.1213"    "y-value: 2.1213"
```

ECE 3040 Homework 1

Question 12:



This photo is sort of hard to see but next time I'll try to make the window smaller so I can take a more clearer screenshot.