
Matlab Project 0

Table of Contents

Problem 1	1
Problem 2	1

Write the full names of the members of your group here.

Problem 1

Let $A = \begin{bmatrix} 4 & 2 \\ 1 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 0 & 7 \\ 4 & 5 \end{bmatrix}$. Create the corresponding matrices in MATLAB and calculate $C = AB$.

```
% As you can see, MATLAB has the capability to render LaTeX
expressions.
```

```
A=[4,2;1,3]
```

```
% This creates the matrix A. Here the comment is superfluous,
% but you have to comment your code sometimes to explain what you
% are doing.
```

```
B=[0,7;4,5];
```

```
% We do not really need to see what  $B$  is.
```

```
C=A*B
```

```
% But we do want to see what the matrix  $C$  is.
```

```
A =
```

```
     4     2
     1     3
```

```
C =
```

```
     8    38
    12    22
```

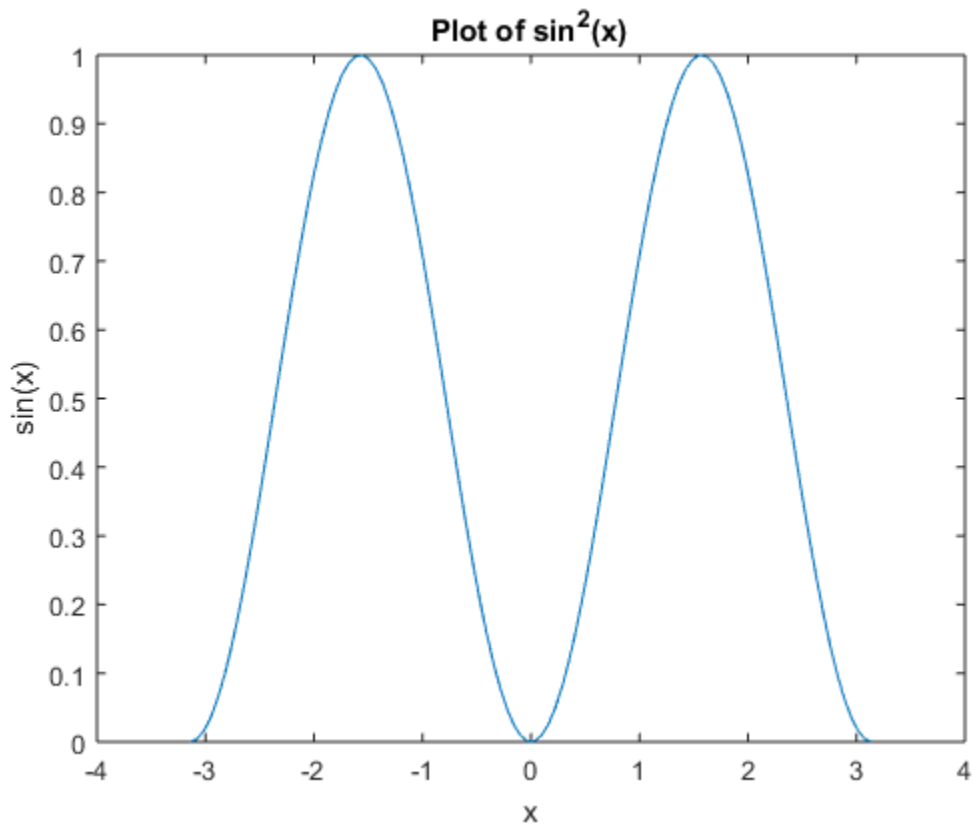
This is how we go back to text mode in case we need to answer any questions in the problem.

Problem 2

Plot the graph of the function $f(x) = \sin^2(x)$ for $x \in [-\pi, \pi]$.

```
x = linspace(-pi,pi,100);
```

```
% MATLAB only knows about vectors. This line creates an array with  
% 100 equally spaced numbers on  $[-\pi, \pi]$   
  
y = sin(x).*sin(x);  
% This calculates the squared of the sine of every number in the  
% array.  
  
plot(x,y)  
  
xlabel('x')  
ylabel('sin(x)')  
title('Plot of sin^2(x)')  
% Make sure to label your figures clearly.
```



Finally, make always very clear what problem and what part of it you are solving.

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