

## Exam OL1

### Contents

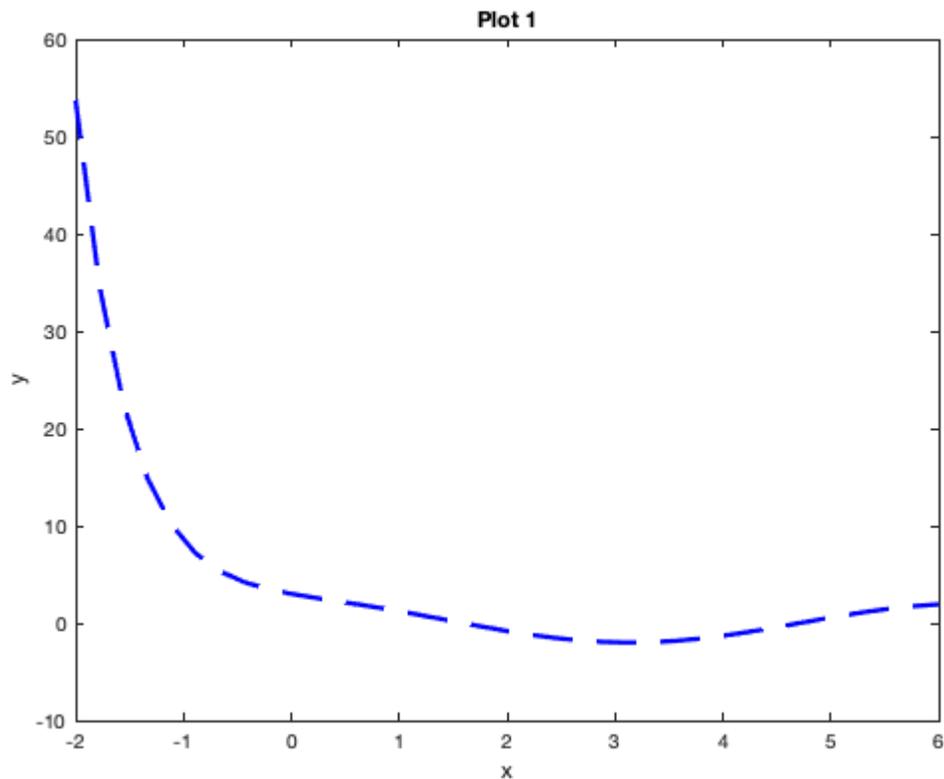
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- [Number 1](#)
- [Number 2](#)
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### Number 1

---

```
clc, clear, close all;  
x=linspace(-2,6,37);  
y=exp((-2*x))+(2*cos(x));  
figure  
plot(x,y,'--b','Linewidth',2.3);  
xlabel x  
ylabel y  
title('Plot 1')
```



### Number 2

---

```
A=ones(5,4);  
for a=1:4  
    for b=1:5
```

```
A(a,b)=((1/2)*a)+(b^3);  
end  
end  
disp(A)
```

```
1.5000    8.5000   27.5000   64.5000  125.5000  
2.0000    9.0000   28.0000   65.0000  126.0000  
2.5000    9.5000   28.5000   65.5000  126.5000  
3.0000   10.0000   29.0000   66.0000  127.0000  
1.0000    1.0000    1.0000    1.0000    0
```

### Number 3

```
x=0;  
for k=2:13  
    x=x+((k^3)-4)/(factorial(k));  
end  
fprintf('The sum is %4.6f\n',x)
```

The sum is 9.718282

### Number 4

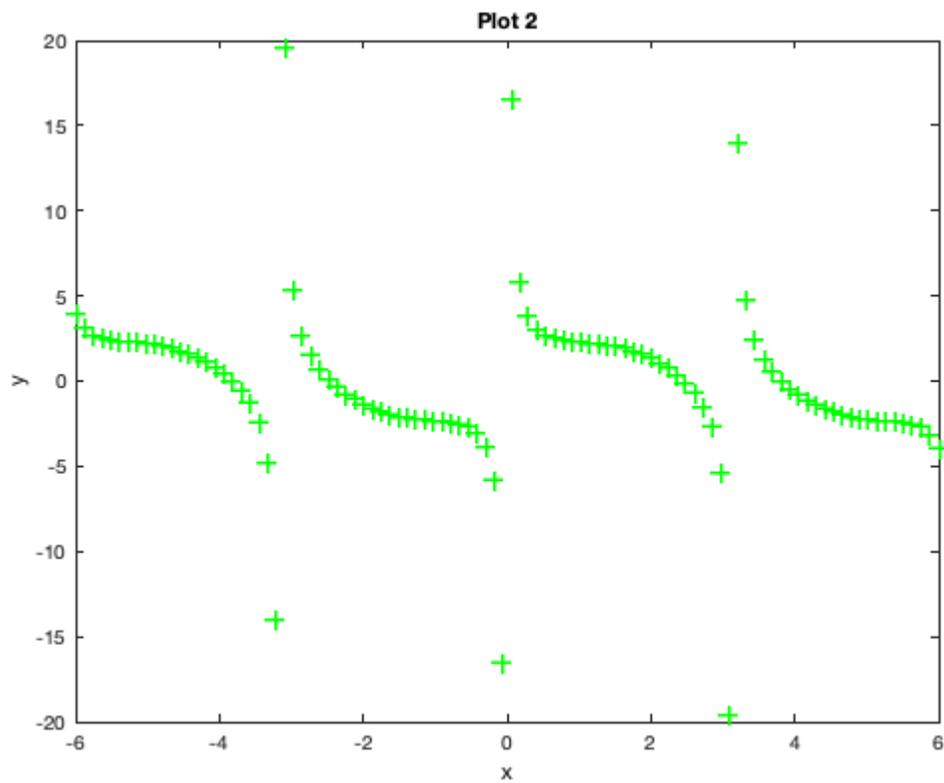
```
A=rand(10,1);  
for a=10:1  
    if a>0.84  
        A= repmat(10,1,pi);  
    end  
end  
disp(A)
```

```
0.3517  
0.8308  
0.5853  
0.5497  
0.9172  
0.2858  
0.7572  
0.7537  
0.3804  
0.5678
```

### Number 5

```
x=linspace(-6,6);  
y=(tan(x).^-1)+2*sin(x);  
figure  
plot(x,y,'+g','Linewidth',2.2);  
xlabel x
```

```
ylabel y
title('Plot 2')
```



## Number 7

```
x=linspace(0,4,20);
y=linspace(0,4,20);
[x,y]= meshgrid(x,y);
z=(sin(x^2))*(cos(x*y))+sin(x*y)+cos(x);
figure
surf(x,y,z)
colormap hot
title('Plot 3', 'FontSize', 11)
xlabel(x, 'FontSize', 11)
ylabel(y, 'FontSize', 11)
zlabel(z, 'FontSize', 11)
```

Plot 3

