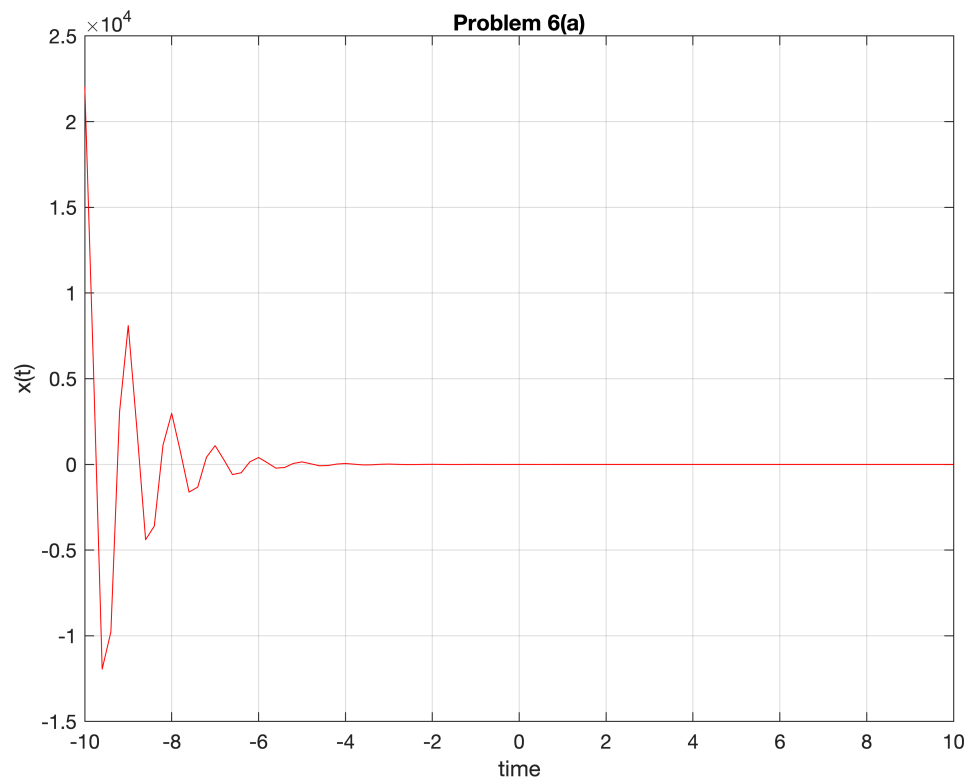


### 6(a) Task 1:

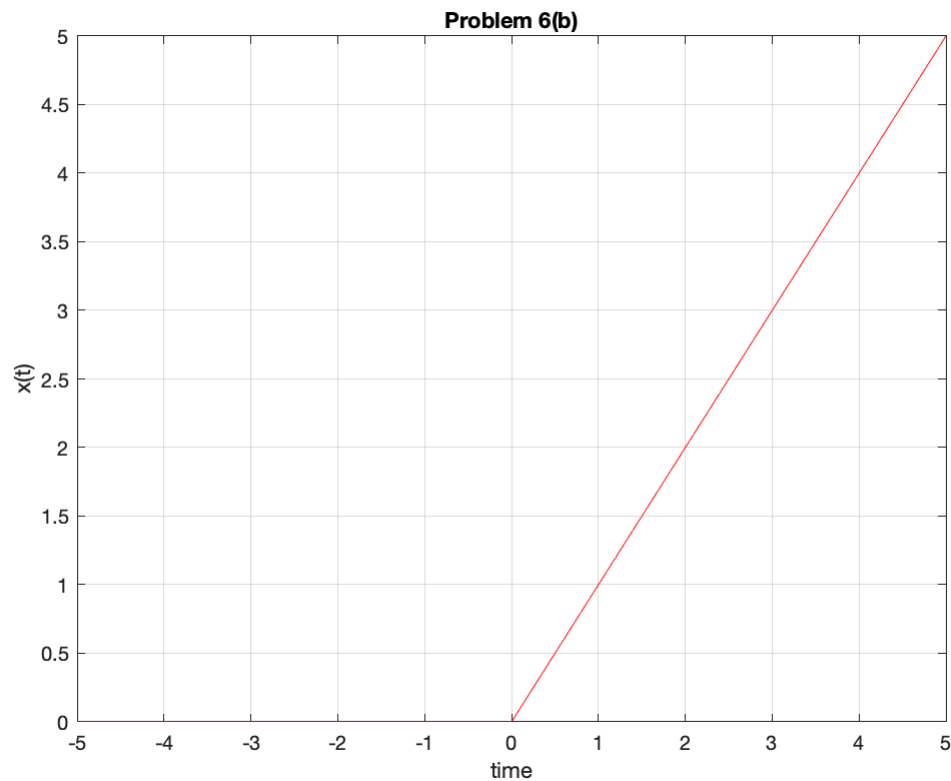
```
t=-10:0.2:10;  
x=exp(-t).*cos(2*pi*t);  
plot(t,x,'r');  
grid on;  
title('Problem 6(a)'); xlabel('time'); ylabel('x(t)');
```



## 6(b) Task 2:

The following is my code for plotting the relu function

```
t = -5:0.1:5;  
x = relu(t);  
plot(t,x,'r');  
grid on;  
title('Problem 6(b)'); xlabel('time'); ylabel('x(t)');
```



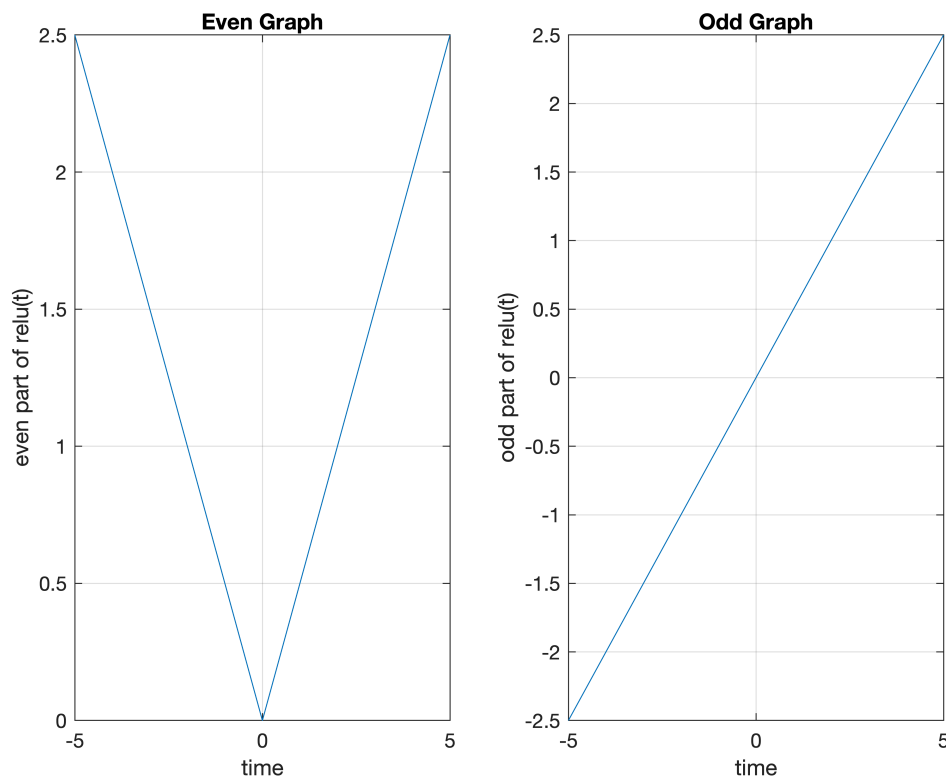
The following is my relu function:

```
function out = relu(t)  
%problem 6(b)  
out = max(0,t);  
end
```

### 6(c) Task 3:

The following is my code for plotting:

```
t = -5:0.1:5;
y1 = even(t,@relu);
y2 = odd(t,@relu);
subplot(1,2,1);
plot(t, y1); grid on;
title('Even Graph'); xlabel('time');ylabel('even part of relu(t)');
subplot(1,2,2);
plot(t, y2); grid on;
title('Odd Graph'); xlabel('time');ylabel('odd part of relu(t)');
```



The following is my relu function (also shown in 6(b), but it's included here for completion):

```
function out = relu(t)
%problem 6(b)
out = max(0,t);
end
```

The following is my odd function:

```
function out = odd(t,f)
out = 0.5*(f(t)-f(-t));
end
```

The following is my even function:

```
function out = even(t,f)
out = 0.5*(f(t)+f(-t));
end
```