



Année universitaire 2020/2021

Module : Outils Informatique

Pr. Amina GHADBAN

Correction TP N°3

Exercice 1 :

1.

```
x=0:((2*pi)/10):10*pi;  
y=x+sin(x);  
plot(x,y,'linewidth',2);
```

2.

```
x=0:10*pi;  
y=x+cos(x);  
z=x+sin(x);  
plot(x,y,'linewidth',2);  
hold on  
plot(x,z,'linewidth',3);
```

3.

```
x=0:10*pi;  
y=2*x.*sin(x);  
plot(x,z,'ro','linewidth',3);  
legend('2xsin(x)');  
title('f(x)=2xsin(x)');
```

Exercice 2 :

```
x=0:10*pi;  
f=x.*cos(x);  
g=x.*sin(x);  
h=x.*sin(-x);  
plot(x,f,'-o',x,g,'-*',x,h,'-x');  
legend('xcos(x)', 'xsin(x)', 'xsin(-x)');
```

Exercice 3 :

```
x=pi/100:10*pi;
f =x.^2.*exp(-4*x);
g=x.*sin(x);
h=sin(x)./x;
k = sqrt(x) + exp(2*x);
subplot(2,2,1)
plot(x,f,'linewidth',2);
subplot(2,2,2)
plot(x,g,'linewidth',2);
subplot(2,2,3)
plot(x,h,'linewidth',2);
subplot(2,2,4)
plot(x,k,'linewidth',2);
```

Exercice 4

```
x=[-2*pi:pi/100:2*pi];

subplot(2,1,1)

plot(x,sin(x),'x-',x,sin(x)./x,'o--')

legend('sin(x)', 'sin(x)/x')

title('Deux courbes avec une seule commande plot')

subplot(2,1,2)

plot(x,sin(x),'- ',x,sin(10*x).*exp(-abs(x)/2),'--')

legend('sin(x)', 'sin(10x)exp(-|x/2|)')

title('Gestion des pointeurs des différentes courbes')

xlabel('x allant de -2pi à 2pi par pas de pi/100')
```