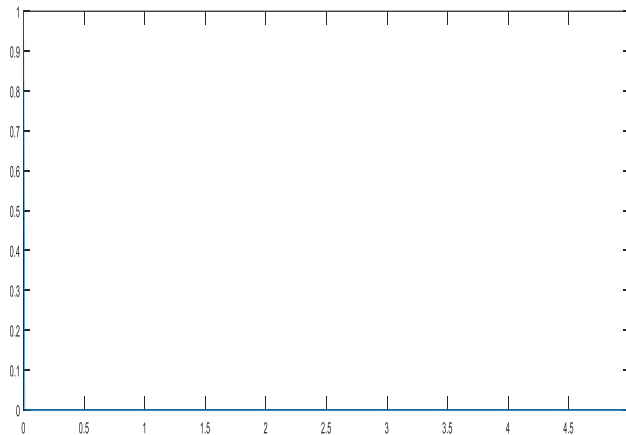## Impulsion de Dirac

Méthode 1 :
```
t=0:0.01:5;
n=length(t);
delta=zeros(1,n);
for i=1:n
  if t(i)==0
    delta(i)=1
  end
end
plot(t,delta);
```


Méthode2 :
```
t=0:0.01:5;
n=length(t);
delta=[1,zeros(1,n-1)];
plot(t,delta);
```
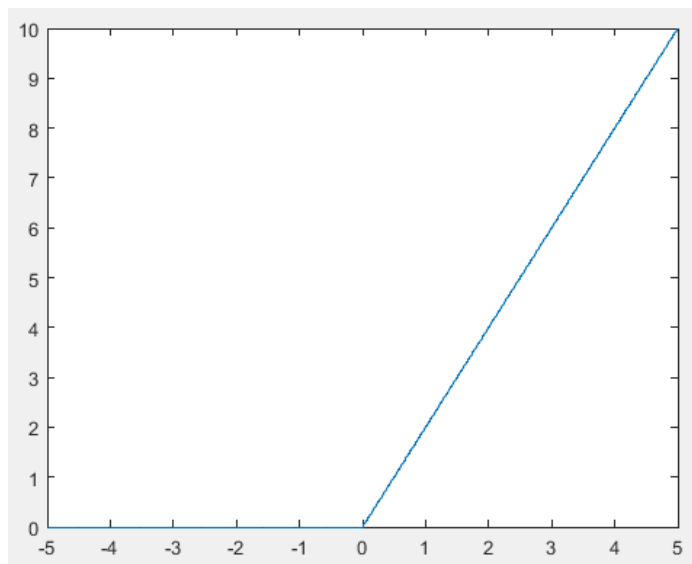
Rampe

Methode1 :
```
t=-5:0.01:5;
n=length(t);
delta=zeros(1,n);
for i=1:n
  if t(i)>=0
    delta(i)=a*t(i)
  end
end
plot(t,delta);
```
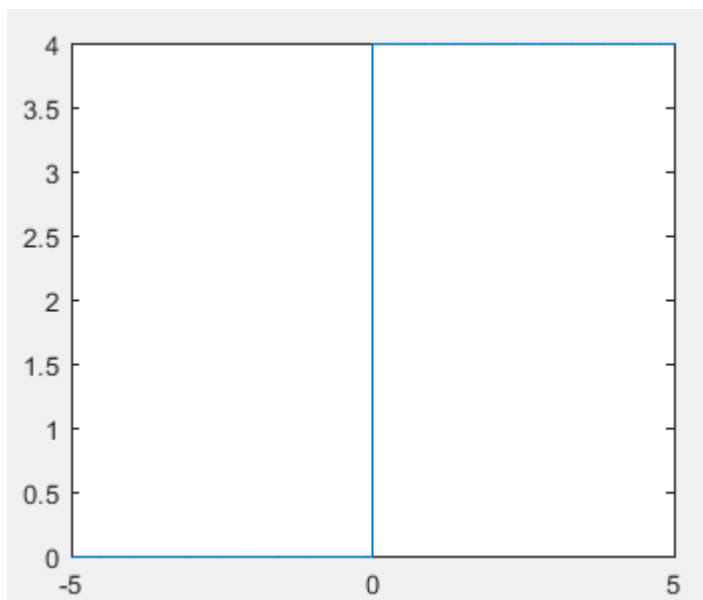
Methode2:
```
t=-5:0.01:5;
n=length(t);
a=5;
rampe=a*t.*(t>=0);
figure;
plot(t,rampe);
```


Echelon

Methode1
```
t=-5:0.01:5;
n=length(t);
echelon=zeros(1,n);
a=4;
for i=1:n
  if t(i)>=0
    echelon(i)=a
  elseif t(i) <0

    echelon(i)=0
  end
end
plot(t,delta);
```

methode2

```
t=-5:0.01:5;
n=length(t);
a=4
echelon=a*(t>0);
figure; plot(t, echelon);
```
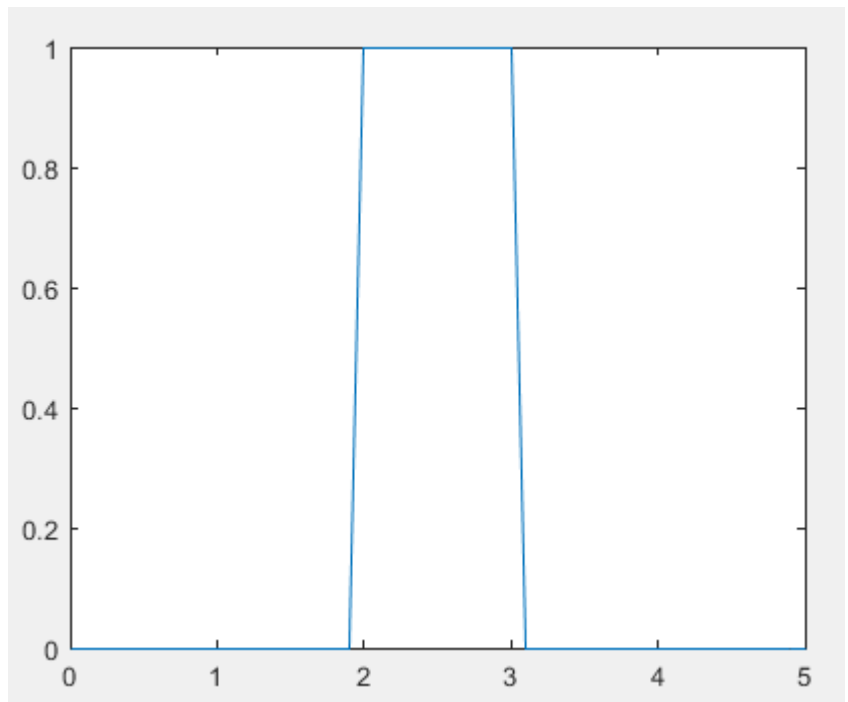
Rectangulaire

Methode1

```
clear all ; clc;
Te=0.1;
t=0:Te:5;
n=length(t);
a=1;
rect=zeros(1,n);
for i=1:n
  if( t(i)>=2 &&t(i)<=3 )
    rect(i)=a
  end
end
plot(t,rect);
```

methode2

```
clear all ; clc;
Te=0.1;
t=0:Te:5;
n=length(t);
a=1;
rect=a.*(t<3 & t>2);
plot(t,rect);
```

Triangle

```
clear all; clc;
t=-5:0.01:5;
n=length(t);
a=2;
t2=2;
t1=-2;
m=(t1+t2)/2;
Tri=((a/(m-t1)).*t-((a*t1)/(m-t1))).*(t<m)+((a/(m-t2)).*t-((a*t2)/(m-t2))).*(t>=m);
plot(t,Tri);
```