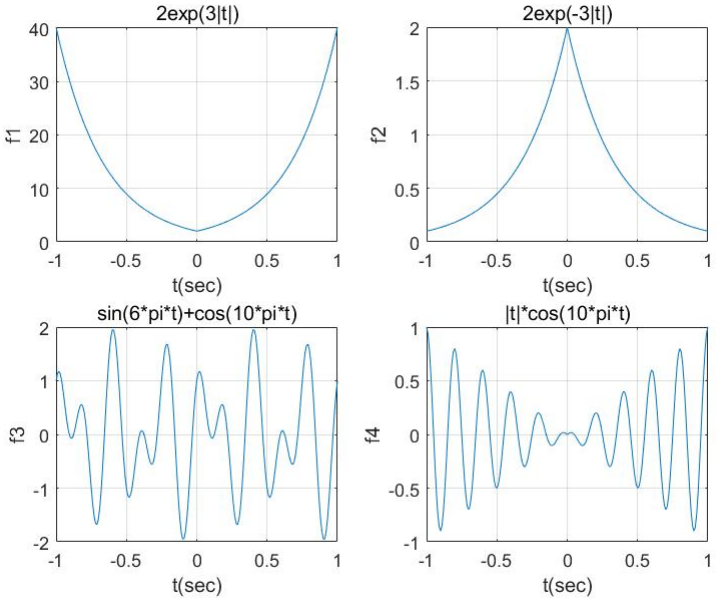
This section is mainly about some basic matlab codes, which include plot continuous signal, stem discrete signal, differential and integral.

- plot function graph

```
t = -1:0.01:1;
f1 = 2*exp(3*abs(t));
subplot(2,2,1)
plot(t,f1)
xlabel('t(sec)')
ylabel('f1')
title('2exp(3|t|)');
grid;
subplot(2,2,2)
f2 = 2*exp(-3*abs(t));
plot(t,f2)
xlabel('t(sec)')
ylabel('f2')
title('2exp(-3|t|)');
grid;
subplot(2,2,3)
f3 = sin(6*pi*t)+cos(10*pi*t);
plot(t,f3)
xlabel('t(sec)')
ylabel('f3')
title('sin(6*pi*t)+cos(10*pi*t)');
grid;
subplot(2,2,4)
f4 = abs(t).*cos(10*pi*t);
plot(t,f4)
xlabel('t(sec)')
ylabel('f4')
title('|t|*cos(10*pi*t)');
grid;
```

The result graph is as follows:

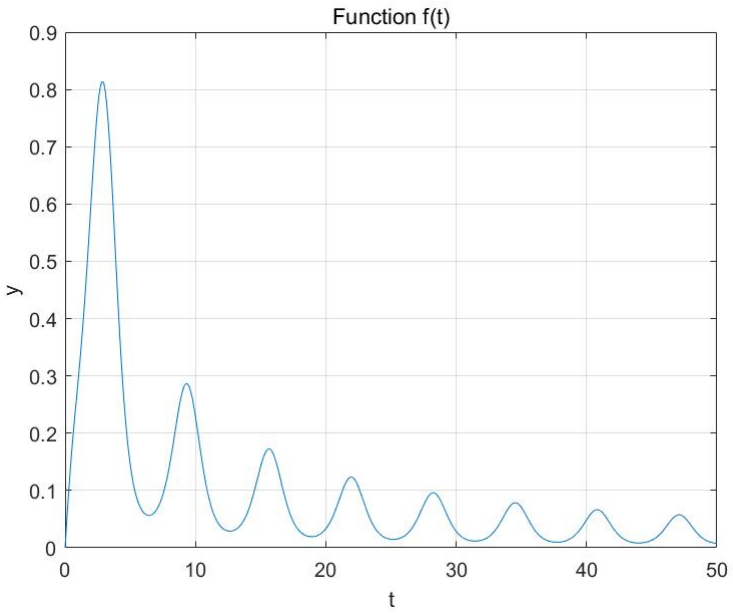


- Use function to generate graph:

```
function y = f(t)
%F 此处显示有关此函数的摘要
%   此处显示详细说明
y = t*exp(-cos(t))/(1+t^2);
end
```

```
t = 0:0.1:50;
N = length(t);
y = zeros(1,N);
for n = 1:N
    y(n) = f(t(n));
end
figure
plot(t,y);
grid
xlabel('t')
ylabel('y')
title('Function f(t)');
```

The result graph is as follows:


Function f(t)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
y
0
10
20
30
40
50
t