matlab 报告

August 30, 2025

1 Question 1

v = 1: 100

w = -cos(v * pi)

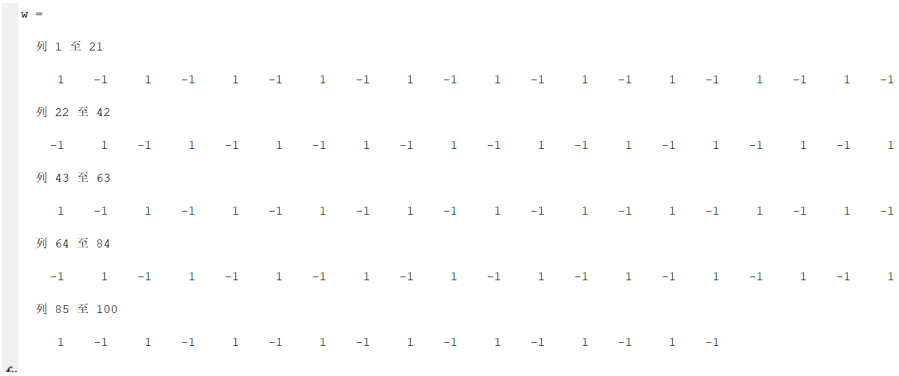

Figure 1: result 1

2 Question 2

a = zeros(1, 200)

a(1:2:end) = 1:100

3 Question 3

A = [75, 80, 90; 50, 75, 55; 65, 80, 50]

Figure 2: result 2

coefficient = [3; 2; 1]

B = A * coefficient / sum(coefficient)

```
A =

    75    80    90
    50    75    55
    65    80    50


coefficient =

     3
     2
     1


B =

   79.1667
   59.1667
   67.5000
```

Figure 3: result 3

4 question 4

C = 1:10

D = repmat(C,3,1)

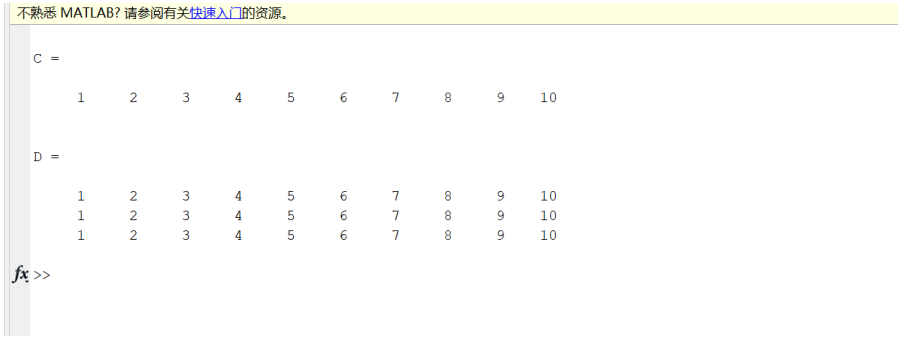

Figure 4: result 4

5 question 5

E = [1, 2; 3, 4]

F = [1;3]

ans = inv(E) * F

Figure 5: Enter Caption

6 question 6

A = 1;

f0 = 1;

t = (1:0.001:10);

```
x = A * cos(2 * pi * f0 * t);
plot(t, x)
title ('cos signal with frequency 1Hz')
xlabel('time in second')
ylabel('amplitue')
```

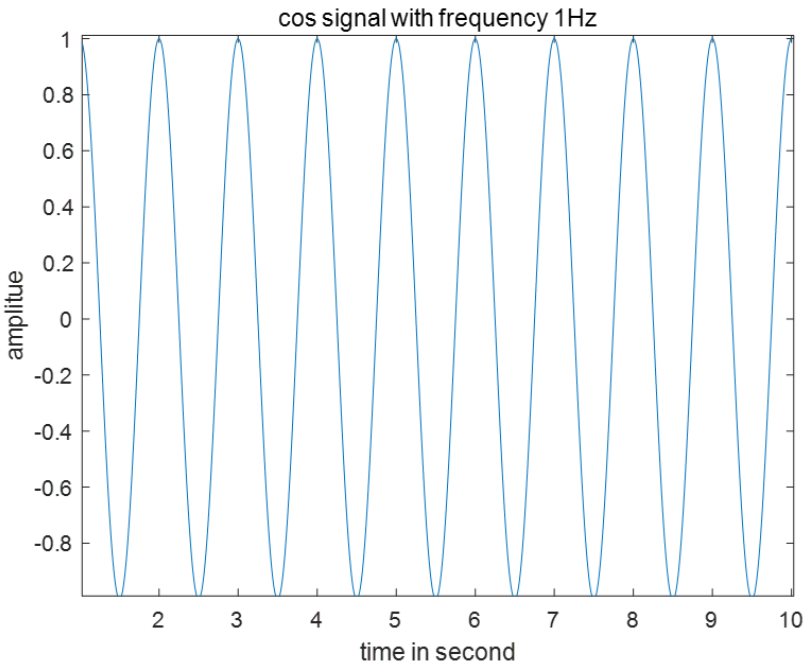

Figure 6: result 6

7 question 7

```
A = 1;
f0 = 1;
t = (1:0.001:10);
subplot(2, 1, 1)
x = A * cos(2 * pi * f0 * t);
plot(t, x)
title ('cos signal with frequency 1Hz')
```

xlabel('time in second')
ylabel('amplitue')
f0 = 2;
subplot(2, 1, 2)
x = A * cos(2 * pi * f0 * t);
plot(t, x)
title ('cos signal with frequency 2Hz')
xlabel('time in second')
ylabel('amplitue')

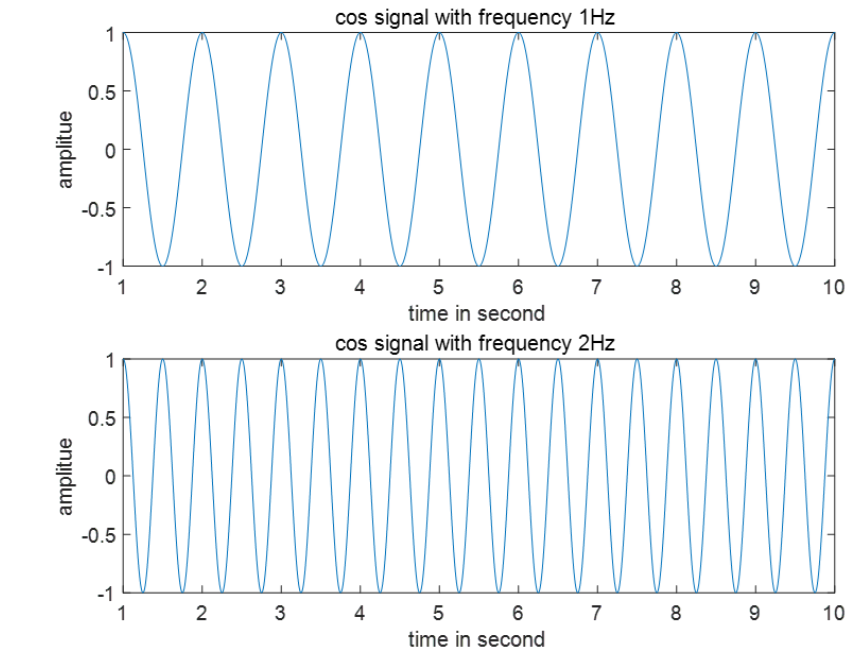

Figure 7: Enter Caption

8 question 8

A = 1;
t = (1:0.001:10);
x = A * cos(2 * pi * 1 * t);

y = A * cos(2 * pi * 2 * t);
plot(t, x)
hold on
plot(t, y)
title ('cos signal with frequency 1/2Hz')
xlabel('time in second')
ylabel('amplitue')

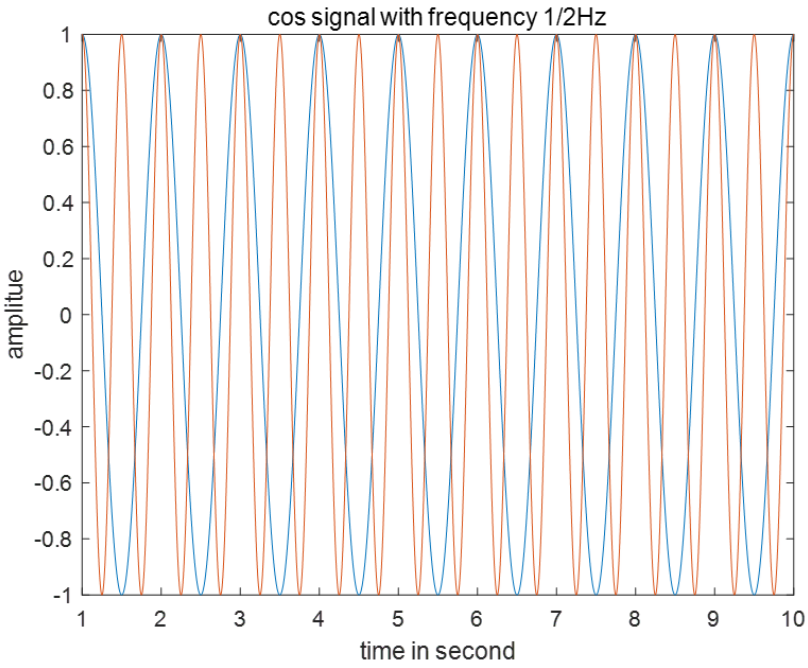

Figure 8: Enter Caption