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]
```

```
本 無 MATLAB? 请参阅有关技事入口的资源。

a = 

列 1 至 21

1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 0 10 0 1

列 22 至 42

0 12 0 13 0 14 0 15 0 16 0 17 0 18 0 19 0 20 0 21

列 43 至 63

22 0 23 0 24 0 25 0 26 0 27 0 28 0 29 0 30 0 31 0 3

列 64 至 84

0 33 0 34 0 35 0 36 0 37 0 38 0 39 0 40 0 41 0 42

列 85 至 105

43 0 44 0 45 0 46 0 47 0 48 0 49 0 50 0 51 0 52 0 5

列 106 至 126
```

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

```
C = 1:10

D = repmat(C,3,1)
```

Figure 4: result 4

```
E = [1, 2; 3, 4]

F = [1;3]

ans = inv(E) * F
```

```
不熟悉 MATLAB? 请参阅有关快速入门的资源。

E =

1 2
3 4

F =

1 3

ans =

1.0000
0.0000
```

Figure 5: Enter Caption

```
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')
```

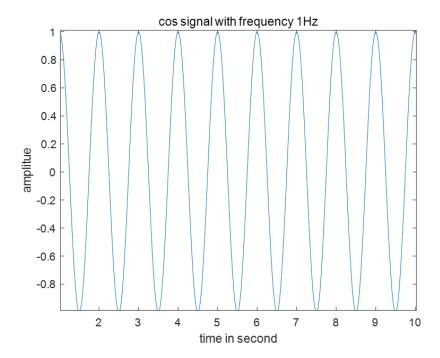


Figure 6: result 6

```
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')
```

```
\label('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')
```

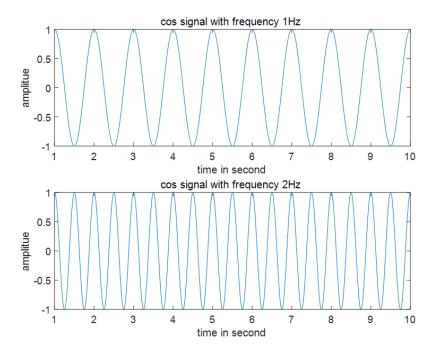


Figure 7: Enter Caption

```
A = 1;

t = (1:0.001:10);

x = A * cos(2 * pi * 1 * t);
```

```
\begin{split} 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') \end{split}
```

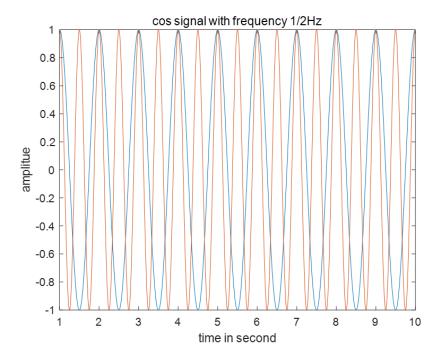


Figure 8: Enter Caption