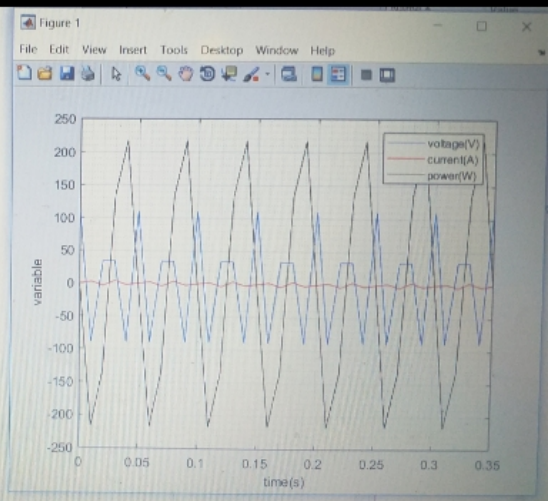
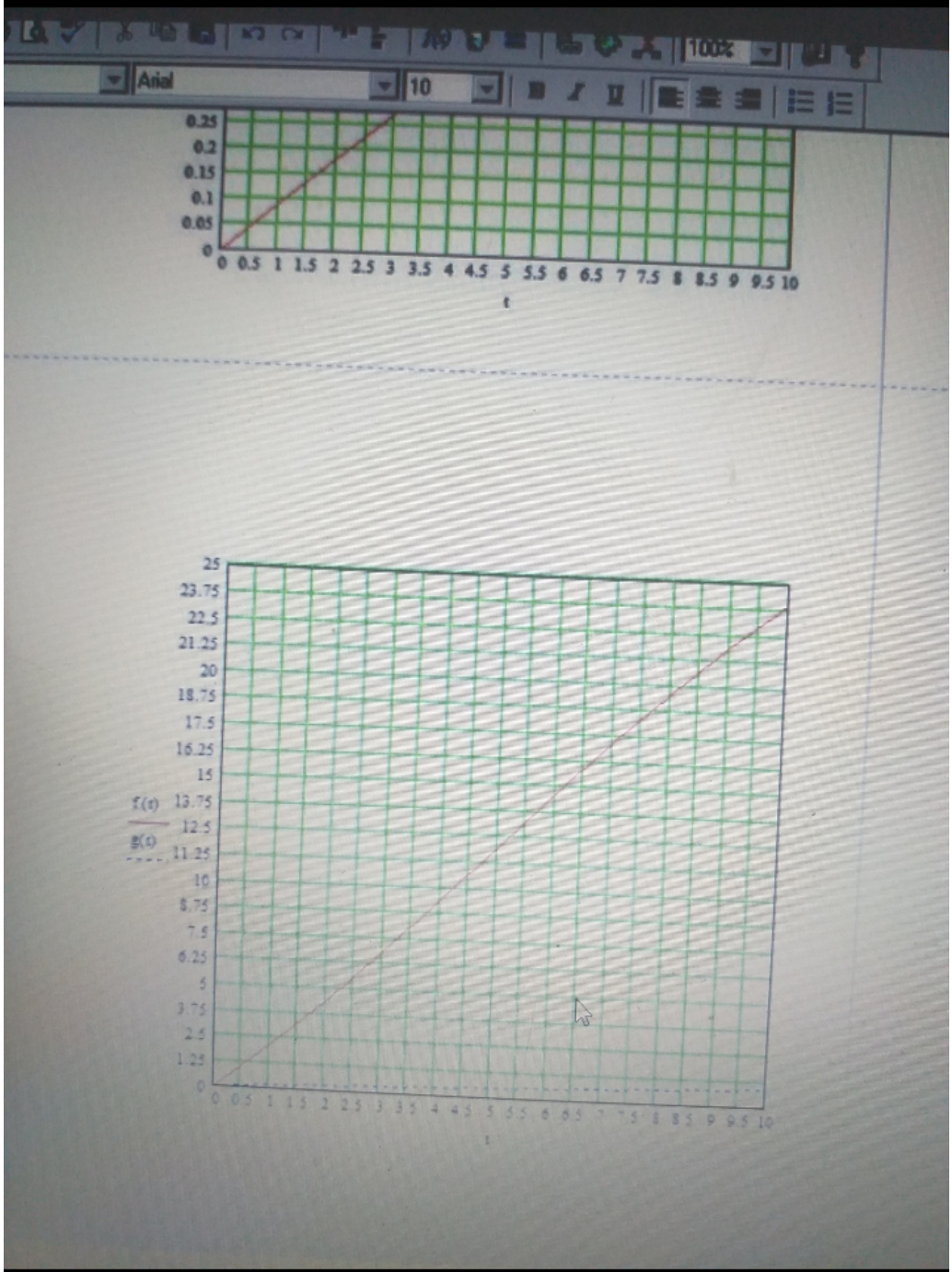
```
commandwindow
clear
clc
A=[1 -2 -1 3; 2 3 0 1; 1 0 -4 -2; 0 -1 3 1]
B=[10;8;3;-7]
C=inv(A)
D=C*B
K=[273;273;273;273]
T=D+K
syms t
V=110*cos(120*pi*t)
C=0.0001
Q=C*V
I=diff(Q)
P=I*V
t=[0:0.01:0.35]
Vn=subs(V,t)
In=subs(I,t)
Pn=subs(P,t)
plot(t,Va,'blue',t,In,'r',t,Pa,'black')
grid on
grid minor
xlabel('time(s)')
ylabel('variable')
legend('voltage(V)','current(A)','power(W)')
```

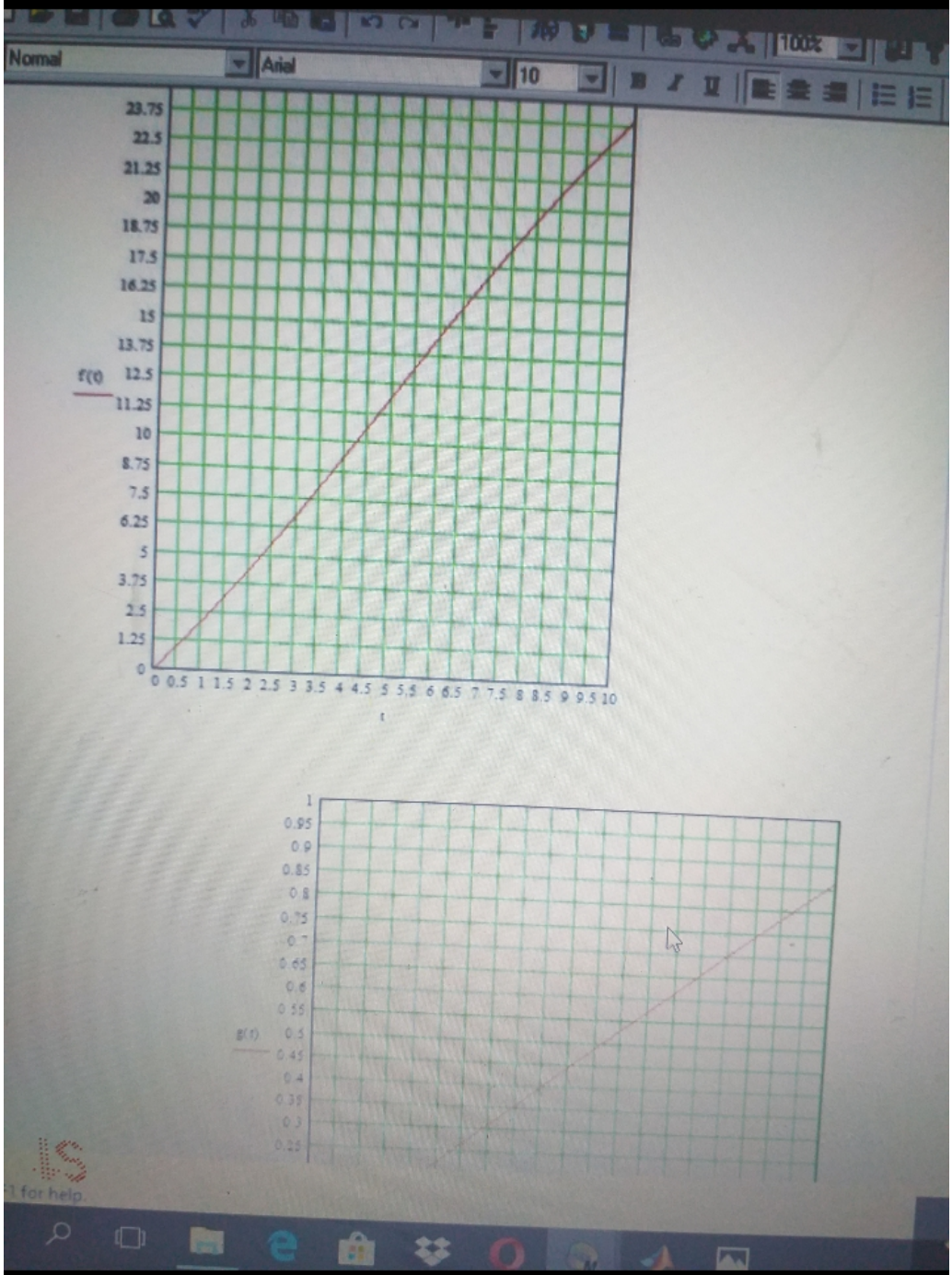


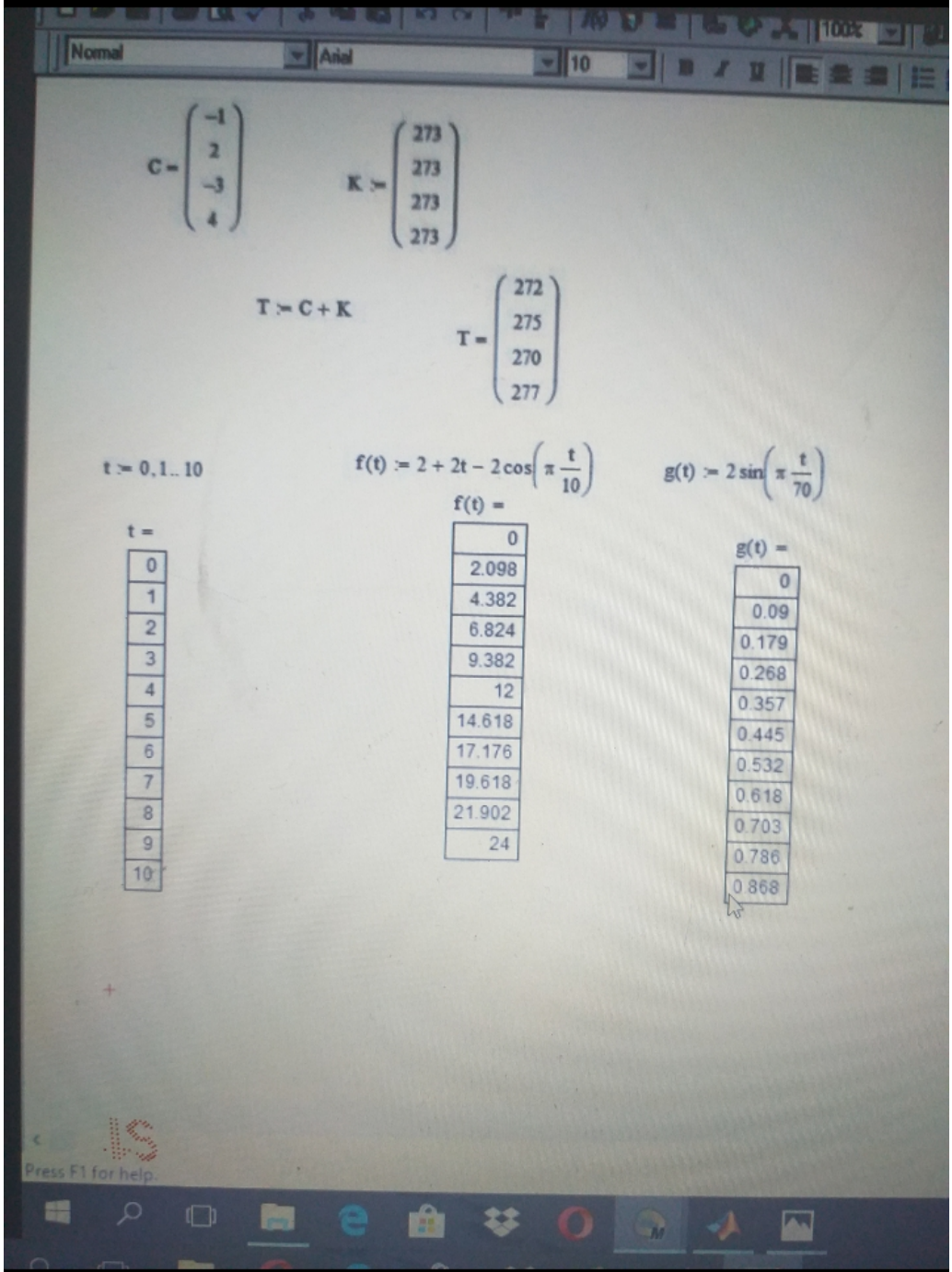
Command Window

New to MATLAB? See resources for Getting Started.

script


Arial
10
100%
0.25
0.2
0.15
0.1
0.05
0
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 7.5 8 8.5 9 9.5 10
t
25
23.75
22.5
21.25
20
18.75
17.5
16.25
15
13.75
12.5
11.25
10
8.75
7.5
6.25
5
3.75
2.5
1.25
0
f(t)
g(t)


Normal
Arial
10
23.75
22.5
21.25
20
18.75
17.5
16.25
15
13.75
f(t)
12.5
11.25
10
8.75
7.5
6.25
5
3.75
2.5
1.25
0
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 7.5 8 8.5 9 9.5 10
t
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
B(t)
0.5
0.45
0.4
0.35
0.3
0.25
F1 for help



Normal | Arial | 10

$$C = \begin{pmatrix} -1 \\ 2 \\ -3 \\ 4 \end{pmatrix} \qquad K := \begin{pmatrix} 273 \\ 273 \\ 273 \\ 273 \end{pmatrix}$$

$$T := C + K \qquad T = \begin{pmatrix} 272 \\ 275 \\ 270 \\ 277 \end{pmatrix}$$

$t := 0, 1 .. 10$ $\qquad f(t) := 2 + 2t - 2\cos\left(\pi \frac{t}{10}\right)$ $\qquad g(t) := 2\sin\left(\pi \frac{t}{70}\right)$

t =

0
1
2
3
4
5
6
7
8
9
10

f(t) =

0
2.098
4.382
6.824
9.382
12
14.618
17.176
19.618
21.902
24

g(t) =

0
0.09
0.179
0.268
0.357
0.445
0.532
0.618
0.703
0.786
0.868

Press F1 for help.

$$A := \begin{pmatrix} 1 & -2 & -1 & 3 \\ 2 & 3 & 0 & 1 \\ 1 & 0 & -4 & -2 \\ 0 & -1 & 3 & 1 \end{pmatrix} \qquad B := \begin{pmatrix} 10 \\ 8 \\ 3 \\ -7 \end{pmatrix}$$

$$C := A^{-1} \cdot B$$

$$C = \begin{pmatrix} -1 \\ 2 \\ -3 \\ 4 \end{pmatrix} \qquad K := \begin{pmatrix} 273 \\ 273 \\ 273 \\ 273 \end{pmatrix}$$

$$T := C + K \qquad T = \begin{pmatrix} 272 \\ 275 \\ 270 \\ 277 \end{pmatrix}$$

$t := 0.1 .. 10$ $\qquad f(t) := 2 + 2t - 2\cos\left(\pi \frac{t}{10}\right)$ $\qquad g(t) := 2\sin\left(\pi \frac{t}{70}\right)$

t =

0
1
2
3
4
5
6
7

f(t) =

0
2.098
4.382
6.824
9.382
12
14.618
17.176
19.618
21.902

g(t) =

0
0.09
0.179
0.268
0.357
0.445
0.532
0.618
0.703

Press F1 for help