

MATLAB R2017a

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C:\Users\BROOKSTONE SCHOOL\Documents\MATLAB

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- ASSIGNMENT.m
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- Ex2.m
- Ex2.mat
- Ex3.m
- Ex3Isaiah.m
- Ex3Isaiahassignment.m
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- Ex4Johnson.m
- Ex5.m
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- Ex8.m
- Ex9.m
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- Isaiahassignment.m

Details

Workspace

Name	Value
A	4x4 double

Editor - C:\Users\BROOKSTONE SCHOOL\Documents\MATLAB\QUESTION4a.m

```

1 -  commandwindow
2 -  clear
3 -  clc
4 -  close all
5 -  A = [0 10 4 -2; -3 -17 1 2; 1 1 1 0; 8 -34 16 -10]
6 -  B = [-4; 2; 6; 4]
7 -  In = inv(A);
8 -  X = In * B;
    
```

Command Window

```

A =
     0    10     4    -2
    -3   -17     1     2
     1     1     1     0
     8   -34    16   -10
    
```

Command Window

```

A =
     0    10     4    -2
    -3   -17     1     2
     1     1     1     0
     8   -34    16   -10

B =
    -4
     2
     6
     4

>> In

In =
   -0.1786   -0.1020    0.5714    0.0153
    0.0357   -0.0153    0.0357   -0.0102
    0.1429    0.1173    0.3929   -0.0051
   -0.0357    0.1582    0.9643   -0.0612
    
```

Command Window

```

>> X

X =
     4.0000
    -0.0000
     2.0000
     6.0000
    
```

```

Editor - C:\Users\BROOKSTONE SCHOOL\Documents\MATLAB\QUESTION4b.m
QUESTION4a.m x QUESTION4b.m x QUESTION4c.m x +
1 - commandwindow
2 - clear
3 - clc
4 - close all
5 - syms t
6 - d = 1.5*exp(-0.75*t)*sin(0.85*t)+0.375*t
7 - V=diff(d)
8 - Vkm = V/1000
9 - A = diff(V)
10 - Akm = A/1000
11 - tn = (0:0.01:2.5)
12 - Vn = subs(Vkm,tn)
13 - An = subs(Akm,tn)
14 - figure(1)
15 - plot(tn,Vn,tn,An)
16 - xlabel('Time (min)')
17 - ylabel('Variable')
18 - legend('Velocity (km/min)', 'Acceleration (km/min^2)', 'Location', 'Best')
19 - grid on
20 - grid minor
21 - axis tight
    
```

```

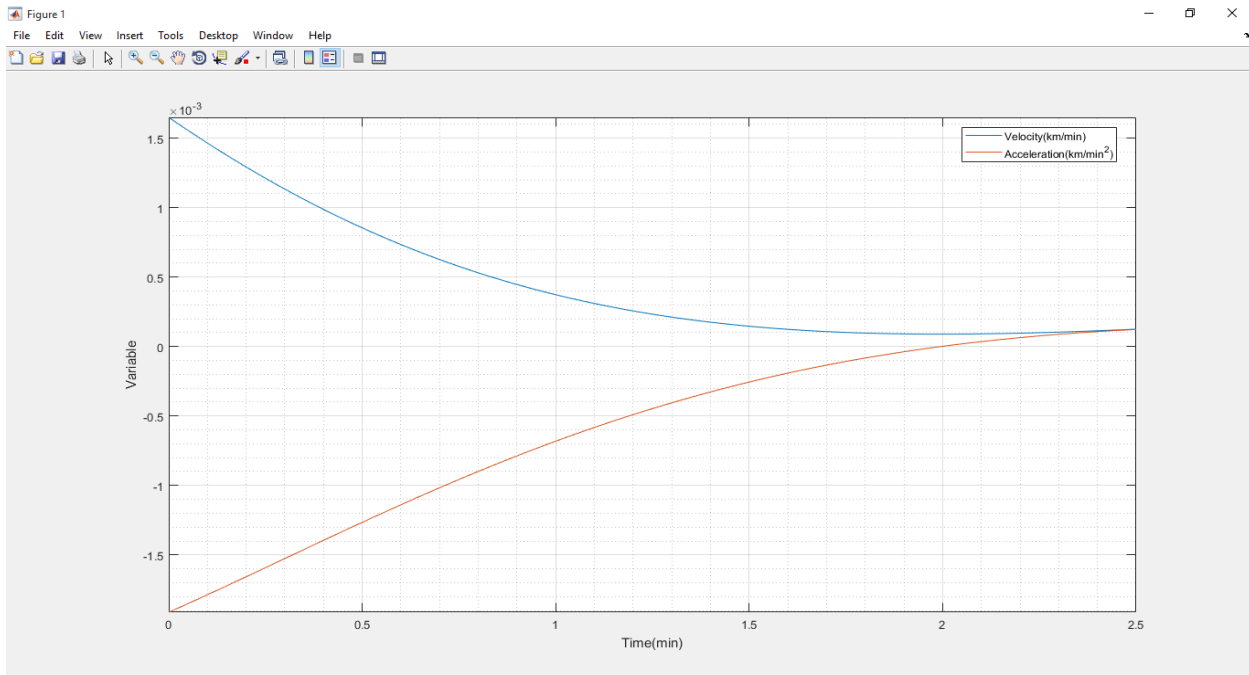
Command Window
d =
(3*t)/8 + (3*sin((17*t)/20)*exp(-(3*t)/4))/2

V =
(51*cos((17*t)/20)*exp(-(3*t)/4))/40 - (9*sin((17*t)/20)*exp(-(3*t)/4))/8 + 3/8

Vkm =
(51*cos((17*t)/20)*exp(-(3*t)/4))/40000 - (9*sin((17*t)/20)*exp(-(3*t)/4))/8000 + 3/8000

A =
- (153*cos((17*t)/20)*exp(-(3*t)/4))/80 - (6*sin((17*t)/20)*exp(-(3*t)/4))/25

Akm =
- (153*cos((17*t)/20)*exp(-(3*t)/4))/80000 - (3*sin((17*t)/20)*exp(-(3*t)/4))/12500
    
```



```

Editor - C:\Users\BROOKSTONE SCHOOL\Documents\MATLAB\QUESTION4c.m
QUESTION4a.m x QUESTION4b.m x QUESTION4c.m x +
1 -  commandwindow
2 -  clear
3 -  clc
4 -  format short g
5 -  close all
6 -  syms x
7 -  y = 5*((sin(5*x))^5)
8 -  a = vpa(pi)
9 -  V = a*(int((y^2),0,a))
10 - V = double(V)
11
    
```

```

Command Window
y =
5*sin(5*x)^5

a =
3.1415926535897932384626433832795

V =
60.721198952014608690095012987519

V =
60.721
    
```