Test question 1

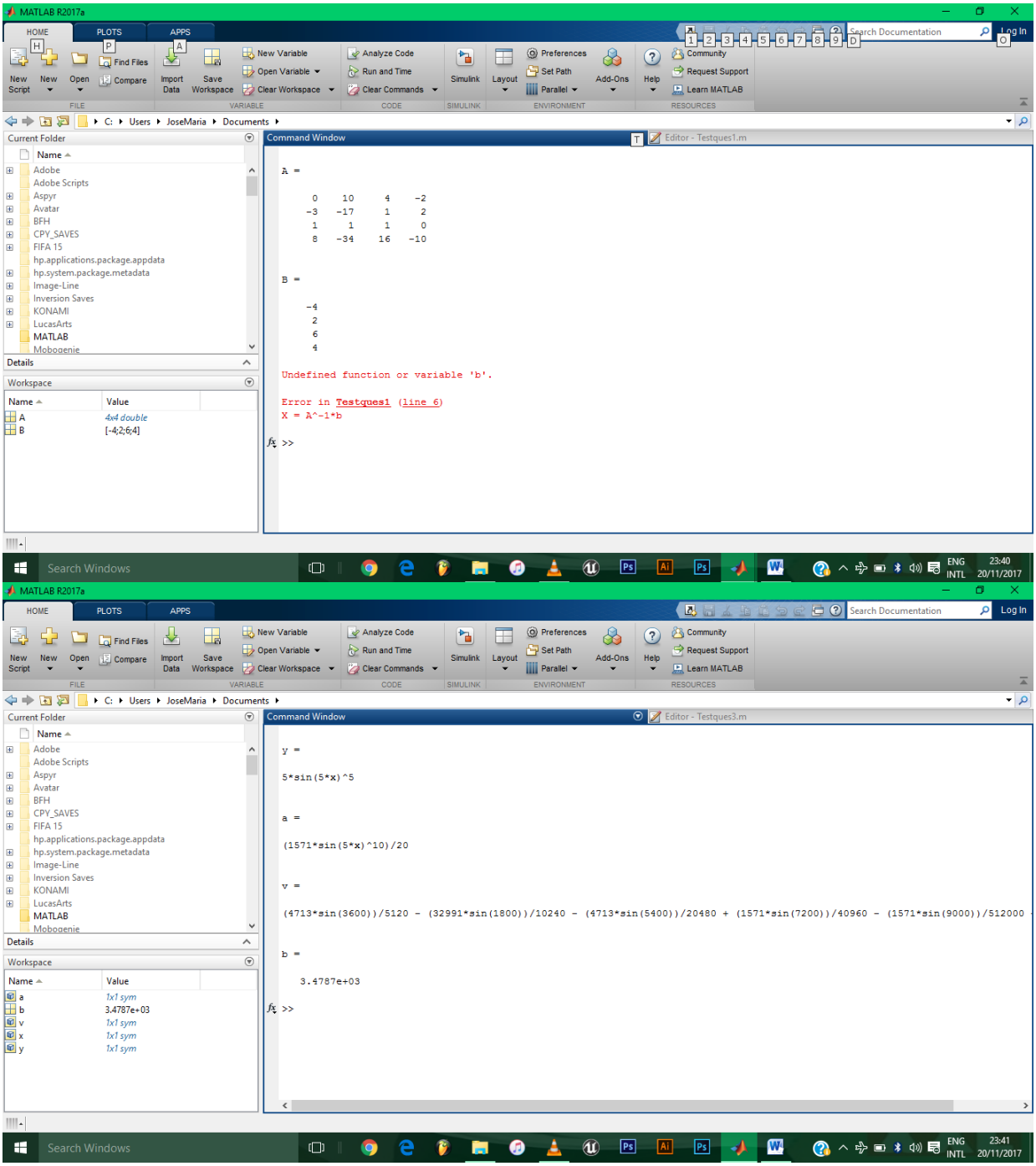
```
commandwindow
clc
clear
A = [0,10,4,-2;-3,-17,1,2;1,1,1,0;8,-34,16,-10]
B = [-4;2;6;4]
X = A^-1*b
```

Test question 2

```
commandwindow
clc
clear
syms t
d = 1.5*exp(-0.75*t)*sin(0.85*t)+0.375*t
tn = [0:0.01:2.5]
v = diff(d)
a = diff(v)
vn = subs(v,tn);
an = subs(a,tn);
plot(tn,vn,tn,an)
grid on
grid minor
axis tight
xlabel('time(min)')
ylabel('variable')
legend('velocity(km/min)','acceleration(km/min^2')
```

Test question 3

```
commandwindow
clc
clear
close all
syms x
y = 5*sin(5*x)^5
a = 3.142*y^2
v = int(a,0,180)
b = double(v)
```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Workspace
Name
Value
A
4x4 double
B
[-4;2;6;4]
Command Window
Editor - Testques1.m
A =
0 10 4 -2
-3 -17 1 2
1 1 1 0
8 -34 16 -10
B =
-4
2
6
4
Undefined function or variable 'b'.
Error in Testques1 (line 6)
X = A^-1*b
fx >>
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Details
Workspace
Name
Value
a
1x1 sym
b
3.4787e+03
v
1x1 sym
x
1x1 sym
y
1x1 sym
Command Window
Editor - Testques3.m
y =
5*sin(5*x)^5
a =
(1571*sin(5*x)^10)/20
v =
(4713*sin(3600))/5120 - (32991*sin(1800))/10240 - (4713*sin(5400))/20480 + (1571*sin(7200))/40960 - (1571*sin(9000))/512000
b =
3.4787e+03
fx >>
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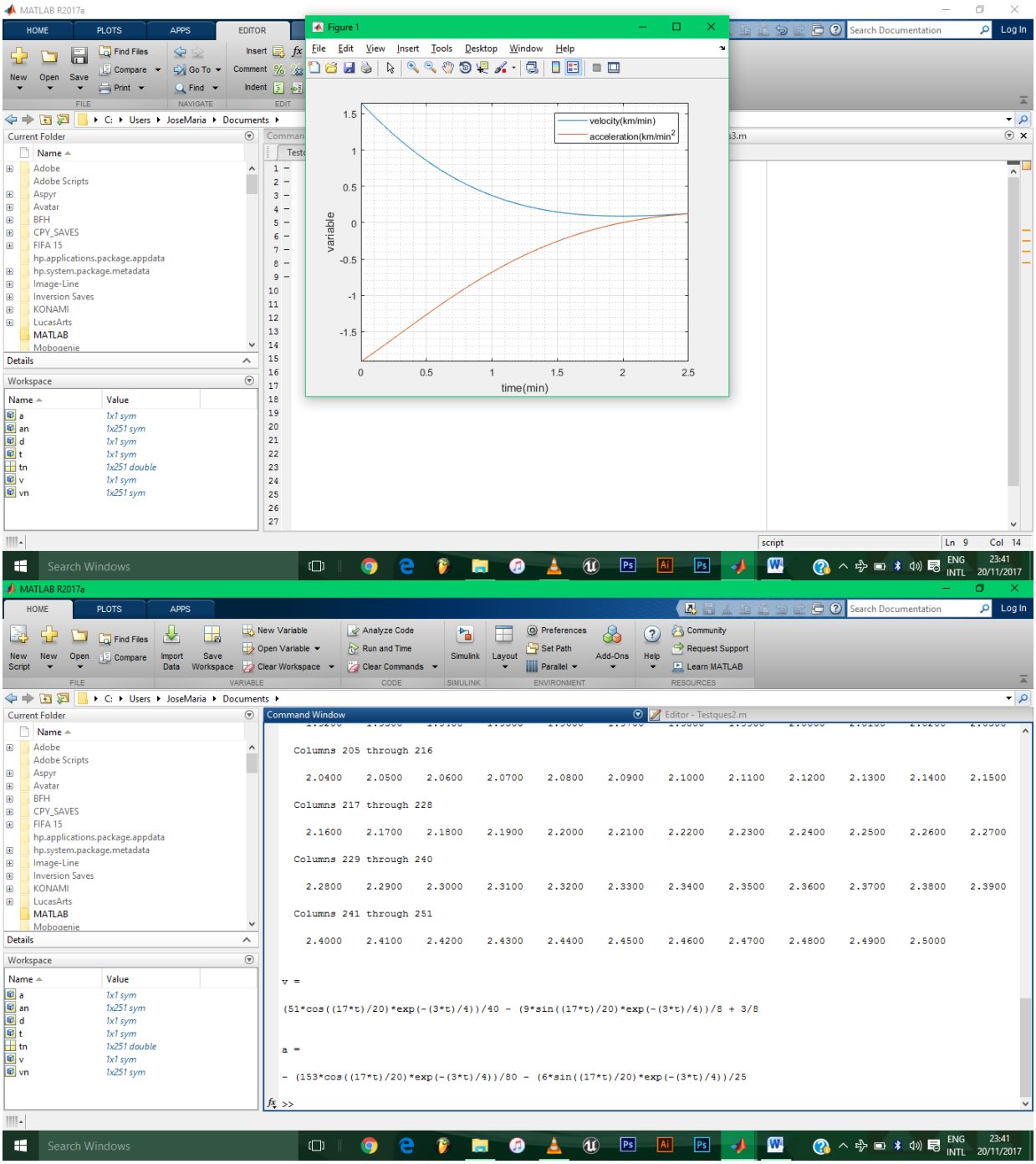
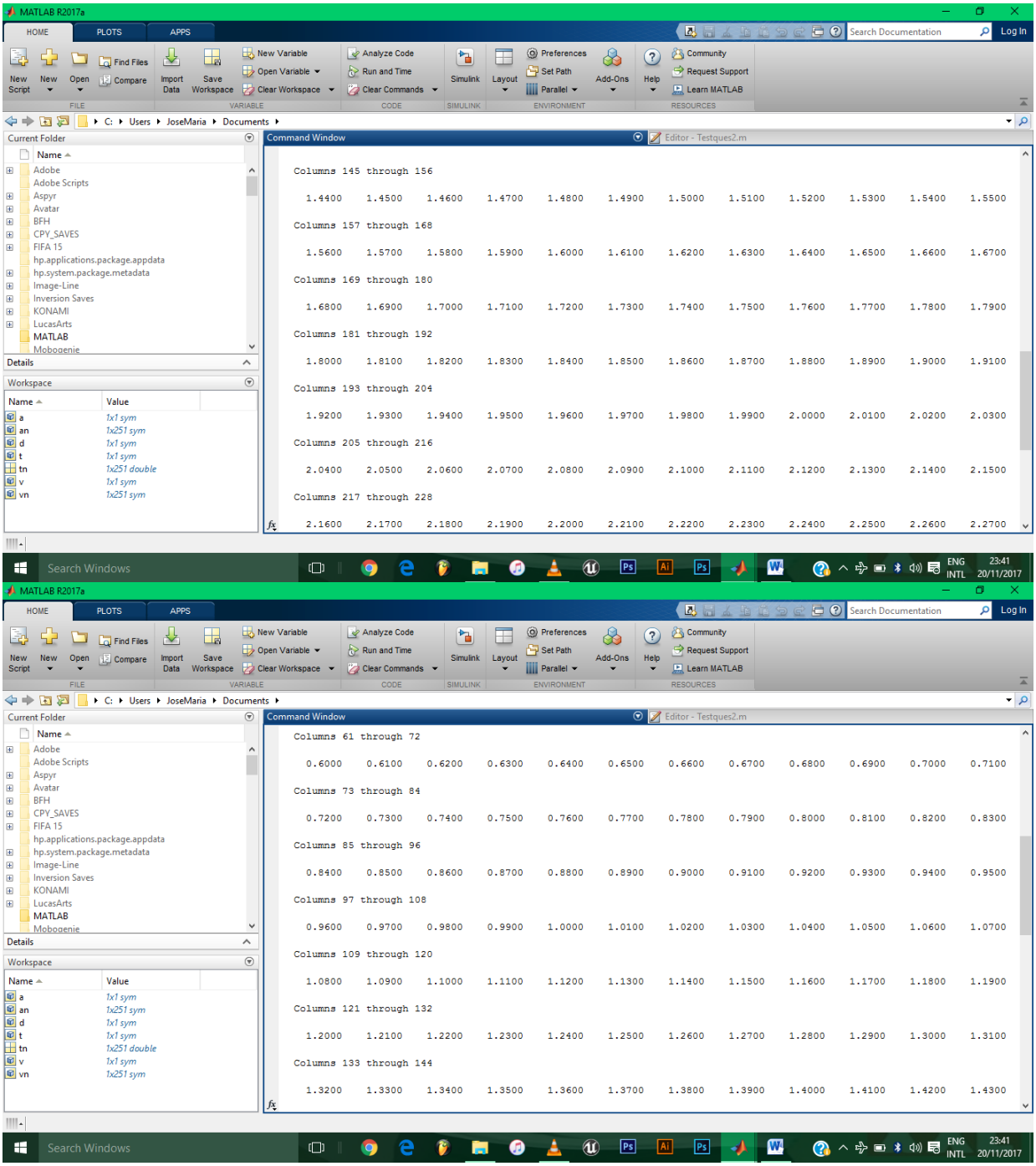

MATLAB R2017a
Figure 1
velocity(km/min)
acceleration(km/min^2)
variable
time(min)
Search Windows
Columns 205 through 216
2.0400 2.0500 2.0600 2.0700 2.0800 2.0900 2.1000 2.1100 2.1200 2.1300 2.1400 2.1500
Columns 217 through 228
2.1600 2.1700 2.1800 2.1900 2.2000 2.2100 2.2200 2.2300 2.2400 2.2500 2.2600 2.2700
Columns 229 through 240
2.2800 2.2900 2.3000 2.3100 2.3200 2.3300 2.3400 2.3500 2.3600 2.3700 2.3800 2.3900
Columns 241 through 251
2.4000 2.4100 2.4200 2.4300 2.4400 2.4500 2.4600 2.4700 2.4800 2.4900 2.5000
v =
(51*cos((17*t)/20)*exp(-(3*t)/4))/40 - (9*sin((17*t)/20)*exp(-(3*t)/4))/8 + 3/8
a =
- (153*cos((17*t)/20)*exp(-(3*t)/4))/80 - (6*sin((17*t)/20)*exp(-(3*t)/4))/25
>>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Workspace
Name
Value
a 1x1 sym
an 1x251 sym
d 1x1 sym
t 1x1 sym
tn 1x251 double
v 1x1 sym
vn 1x251 sym
Command Window
Editor - Testques2.m
Columns 145 through 156
1.4400 1.4500 1.4600 1.4700 1.4800 1.4900 1.5000 1.5100 1.5200 1.5300 1.5400 1.5500
Columns 157 through 168
1.5600 1.5700 1.5800 1.5900 1.6000 1.6100 1.6200 1.6300 1.6400 1.6500 1.6600 1.6700
Columns 169 through 180
1.6800 1.6900 1.7000 1.7100 1.7200 1.7300 1.7400 1.7500 1.7600 1.7700 1.7800 1.7900
Columns 181 through 192
1.8000 1.8100 1.8200 1.8300 1.8400 1.8500 1.8600 1.8700 1.8800 1.8900 1.9000 1.9100
Columns 193 through 204
1.9200 1.9300 1.9400 1.9500 1.9600 1.9700 1.9800 1.9900 2.0000 2.0100 2.0200 2.0300
Columns 205 through 216
2.0400 2.0500 2.0600 2.0700 2.0800 2.0900 2.1000 2.1100 2.1200 2.1300 2.1400 2.1500
Columns 217 through 228
2.1600 2.1700 2.1800 2.1900 2.2000 2.2100 2.2200 2.2300 2.2400 2.2500 2.2600 2.2700
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an 1x251 sym
d 1x1 sym
t 1x1 sym
tn 1x251 double
v 1x1 sym
vn 1x251 sym
Command Window
Editor - Testques2.m
Columns 61 through 72
0.6000 0.6100 0.6200 0.6300 0.6400 0.6500 0.6600 0.6700 0.6800 0.6900 0.7000 0.7100
Columns 73 through 84
0.7200 0.7300 0.7400 0.7500 0.7600 0.7700 0.7800 0.7900 0.8000 0.8100 0.8200 0.8300
Columns 85 through 96
0.8400 0.8500 0.8600 0.8700 0.8800 0.8900 0.9000 0.9100 0.9200 0.9300 0.9400 0.9500
Columns 97 through 108
0.9600 0.9700 0.9800 0.9900 1.0000 1.0100 1.0200 1.0300 1.0400 1.0500 1.0600 1.0700
Columns 109 through 120
1.0800 1.0900 1.1000 1.1100 1.1200 1.1300 1.1400 1.1500 1.1600 1.1700 1.1800 1.1900
Columns 121 through 132
1.2000 1.2100 1.2200 1.2300 1.2400 1.2500 1.2600 1.2700 1.2800 1.2900 1.3000 1.3100
Columns 133 through 144
1.3200 1.3300 1.3400 1.3500 1.3600 1.3700 1.3800 1.3900 1.4000 1.4100 1.4200 1.4300
Search Windows
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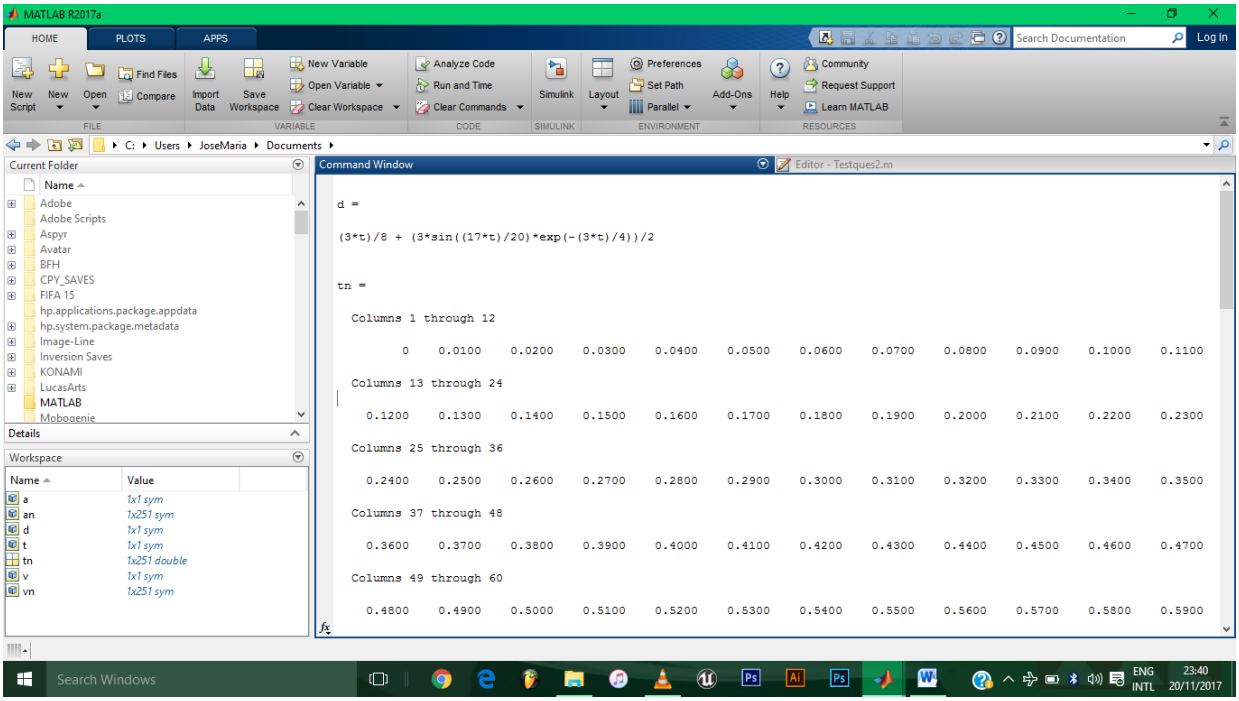
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an 1x251 sym
d 1x1 sym
t 1x1 sym
tn 1x251 double
v 1x1 sym
vn 1x251 sym
Command Window
Editor - Testques2.m
d =
(3*t)/8 + (3*sin((17*t)/20)*exp(-(3*t)/4))/2
tn =
Columns 1 through 12
0 0.0100 0.0200 0.0300 0.0400 0.0500 0.0600 0.0700 0.0800 0.0900 0.1000 0.1100
Columns 13 through 24
0.1200 0.1300 0.1400 0.1500 0.1600 0.1700 0.1800 0.1900 0.2000 0.2100 0.2200 0.2300
Columns 25 through 36
0.2400 0.2500 0.2600 0.2700 0.2800 0.2900 0.3000 0.3100 0.3200 0.3300 0.3400 0.3500
Columns 37 through 48
0.3600 0.3700 0.3800 0.3900 0.4000 0.4100 0.4200 0.4300 0.4400 0.4500 0.4600 0.4700
Columns 49 through 60
0.4800 0.4900 0.5000 0.5100 0.5200 0.5300 0.5400 0.5500 0.5600 0.5700 0.5800 0.5900
Search Windows
ENG
INTL
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