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18/ENG03/052
Civil Engineering

1) Initial temp = 10°C at 0°C

5 min = 300 sec

actual temp = 25°C

~~$\Delta t = 20 - 10$ min = 24.9~~

3 min = 24.9

$\Delta t = 20 - 10 = 10°C$

Find := 24.9°C

$\Delta T_0 = 24.9 - 10 = 14.9°C$

10°C to 300 sec

14.9°C - x

$10x = 4470$

~~10x~~ = 447

$x = 4475$

x = 7mins = 27s //

2a) command window - 86, 88, 90, 92, 94, 96, 98, 100, 102

```
clear
cc
close all
format short g
mdata = xls read (online quiz data if that data')
x = mdata(1:2:250:1)
y = mdata(1:2:250:2)
Plot (x, y)
grid on
grid minor
```

2b) $\ln(T-10) = kt + C$

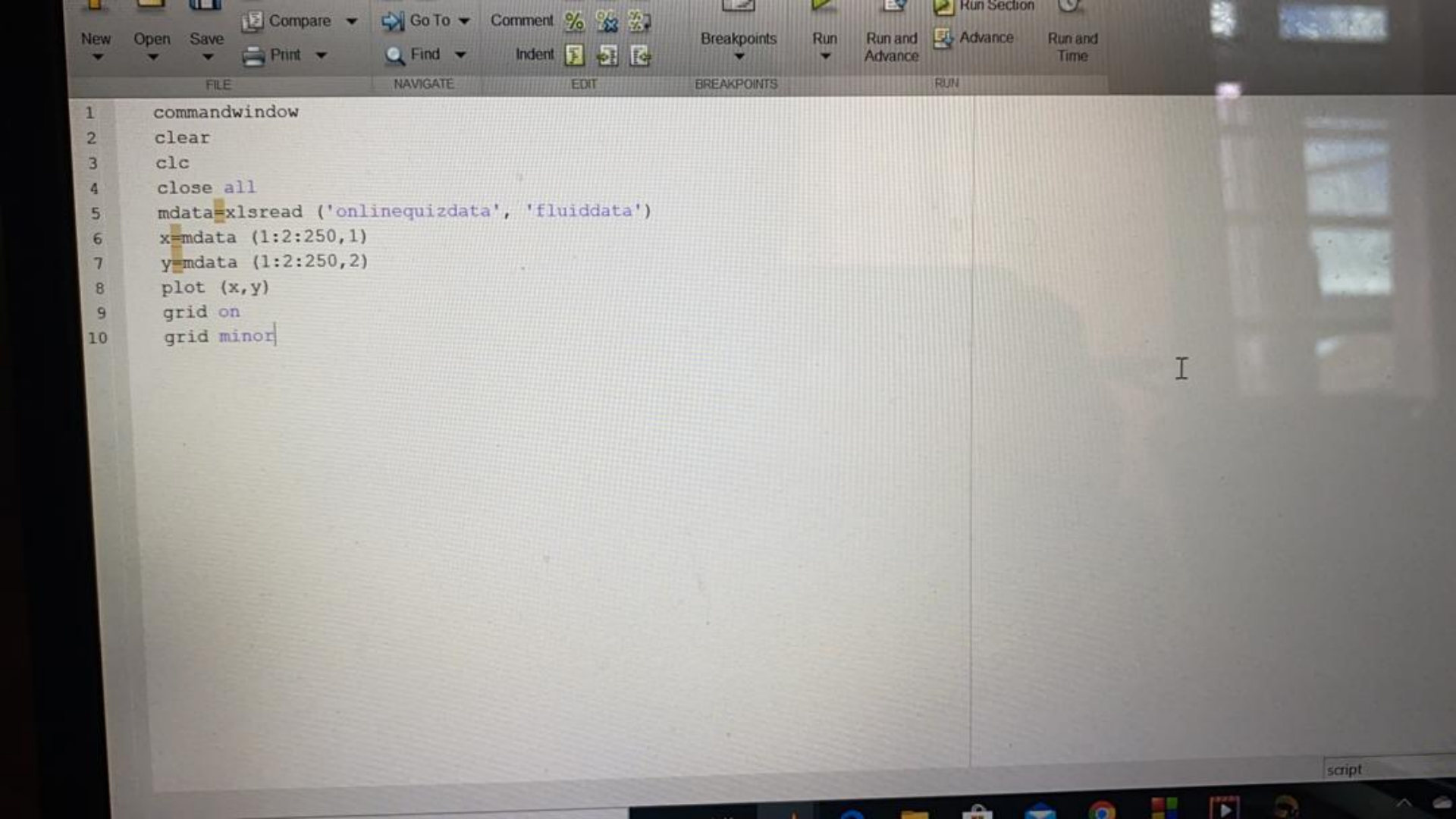
$T = e^{kt} T_0 + 10$

$20 = 15e^{5k} + 10$

$20 = 15e^{5k} + 10 \quad \ldots 5 \text{ mins}$

$k = 0.081$

$T = 15e^{0.081t} + 10$


New
Open
Save
Compare
Print
FILE
Go To
Find
NAVIGATE
Comment
Indent
EDIT
Breakpoints
BREAKPOINTS
Run
Run and Advance
Run Section
Advance
Run and Time
RUN
commandwindow
clear
clc
close all
mdata=xlsread ('onlinequizdata', 'fluiddata')
x=mdata (1:2:250,1)
y=mdata (1:2:250,2)
plot (x,y)
grid on
grid minor
script