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18/ENG05/037
MECHATRONICS

1) $T_1 = 10^\circ\text{C}$

$T_2 = 20^\circ\text{C}$

Time taken = 5 minutes

Actual Temp = 24.9°C

Difference between T_2 & $T_1 = 20^\circ\text{C} - 10^\circ\text{C} = 10^\circ\text{C}$

It takes 5 mins to cover 10°C

$5^\circ\text{C} = \frac{1}{2}$ of 5 mins

$= 5^\circ\text{C} - 2.5$ mins (to move from 20°C to 25°C)

$25^\circ\text{C} = 2.5$ m

$24.9^\circ\text{C} = ?$

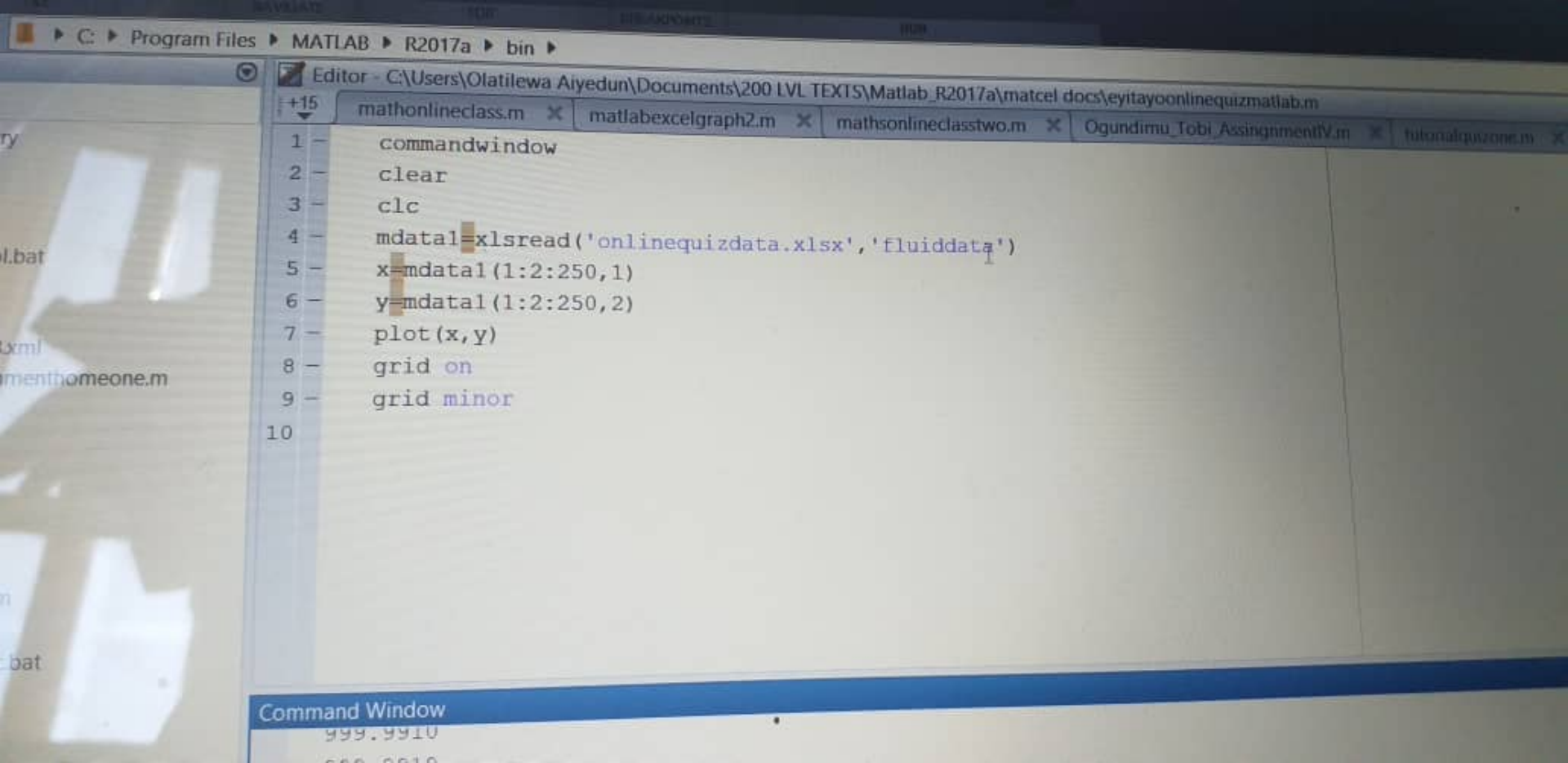
Cross multiply

$= \frac{2.5 \times 24.9}{25}$ [25 min = 150s]

$= \frac{150 \times 24.9}{25} = 6 \times 24.9 = 149.4$

$\therefore 149 \div 60$

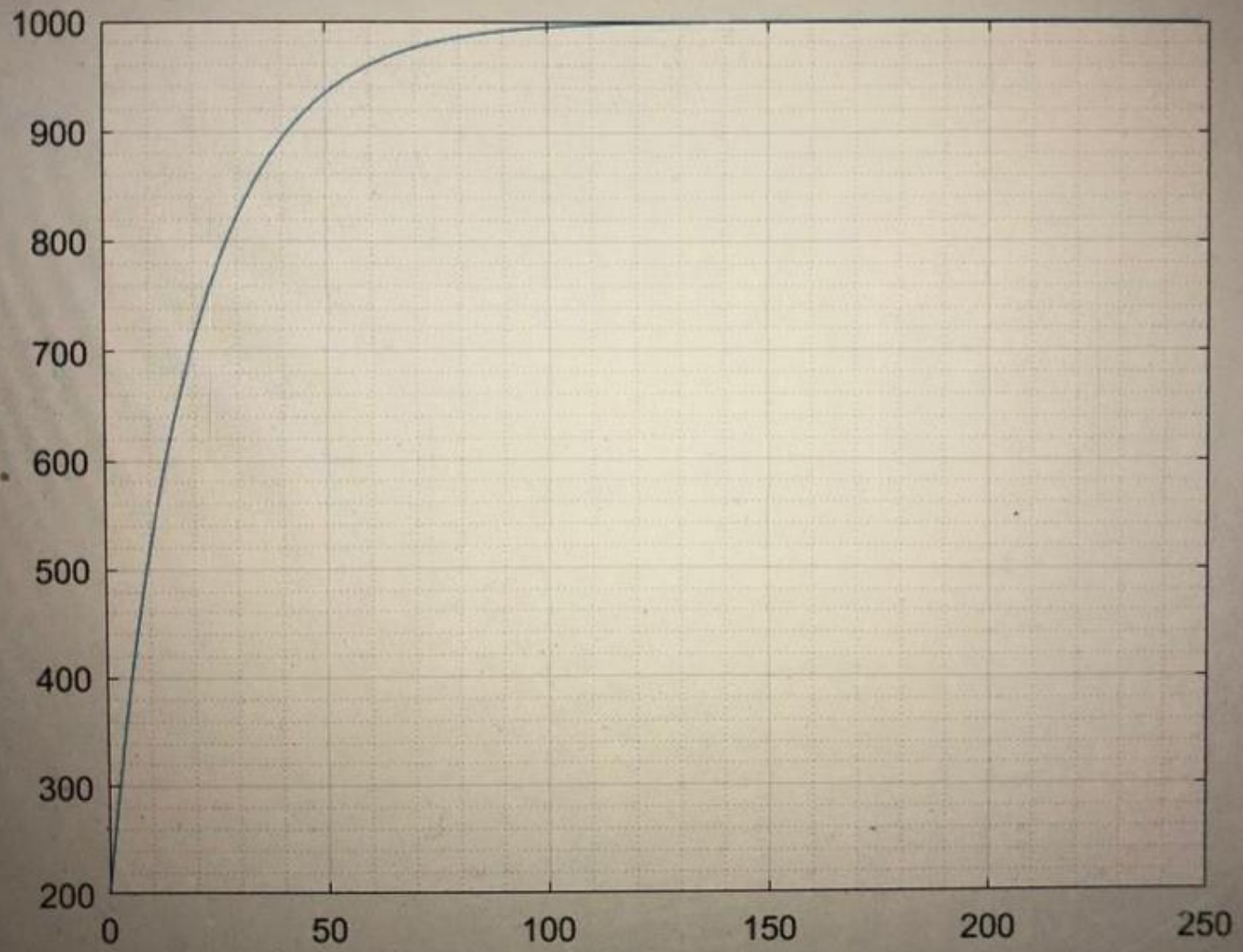
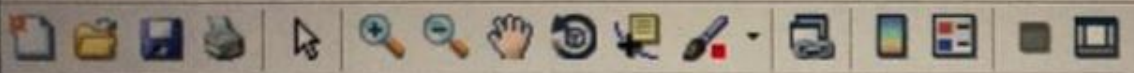
$= 2.49 \approx 2$ mins 49s



Command Window

999.9910

640.0010



ts ▶ MATI

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