Plot a graph between 'C' and 'I'. Find slope of graph.

C(μF)	0.1	0.2	0.3	0.4	0.5	0.6
I(mA)	4	8	12	16	20	24

Scale along x-axis :-

1 Big Box = 0.1 μF

1 small Box = $\frac{0.1}{10}$ = 0.01 μF

Scale along y-axis :-

1 Big Box = 4mA

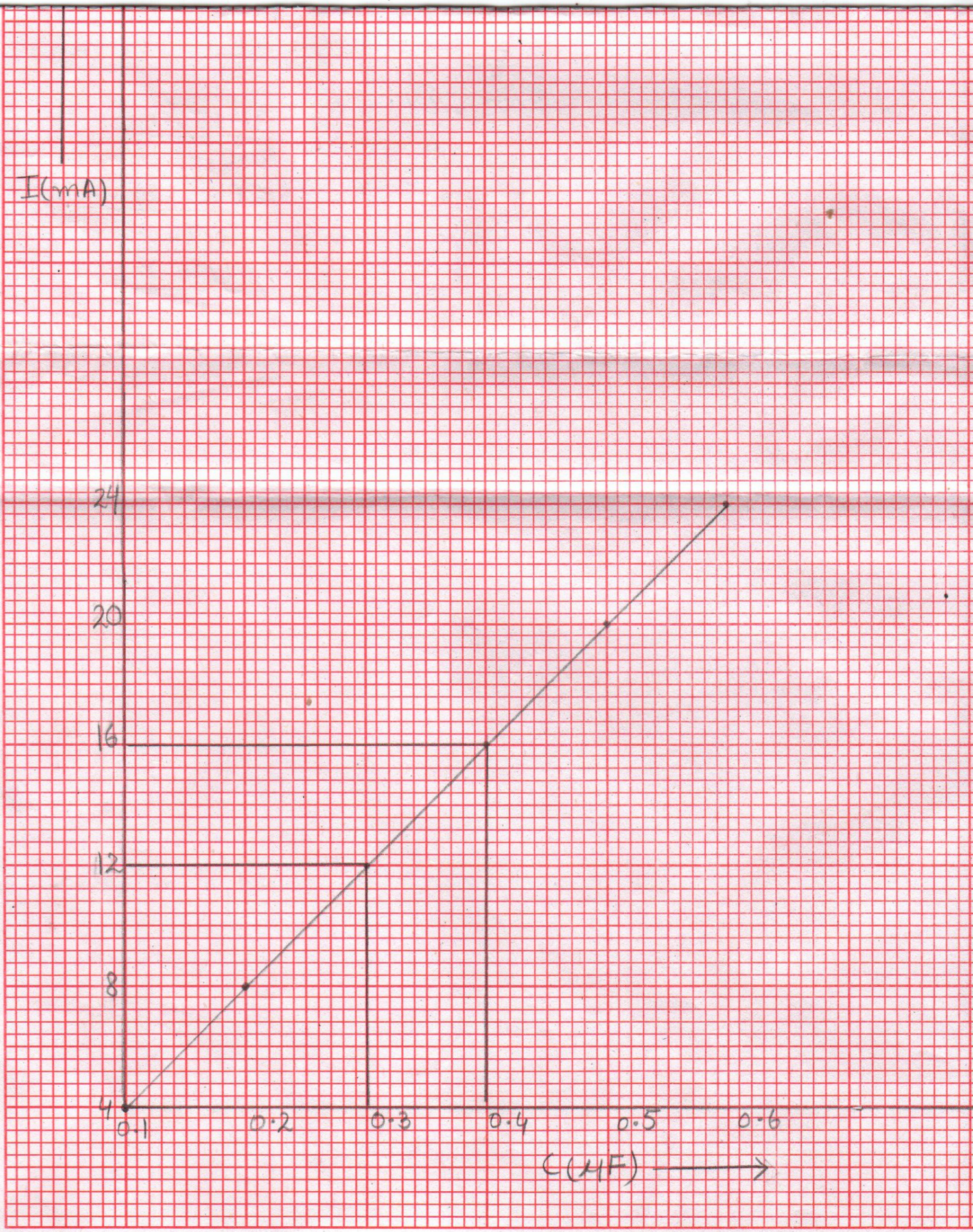
1 Small Box = $\frac{4}{10}$ = 0.4mA

Slope = $\frac{\Delta Y}{\Delta X} = \frac{\Delta I}{\Delta C} = \frac{I_2 - I_1}{C_2 - C_1}$

$= \frac{(16-12) \times 10^{-3} A}{(0.4-0.3) \times 10^{-6} F}$

$= \frac{4 \times 10^{-3} A}{0.1 \times 10^{-6} F}$

$= 4 \times 10^{4}$ Amp/Farad


I(mA)
24
20
16
12
8
4
0·1
0·2
0·3
0·4
0·5
0·6
C(μF)

$= \frac{1}{10}$

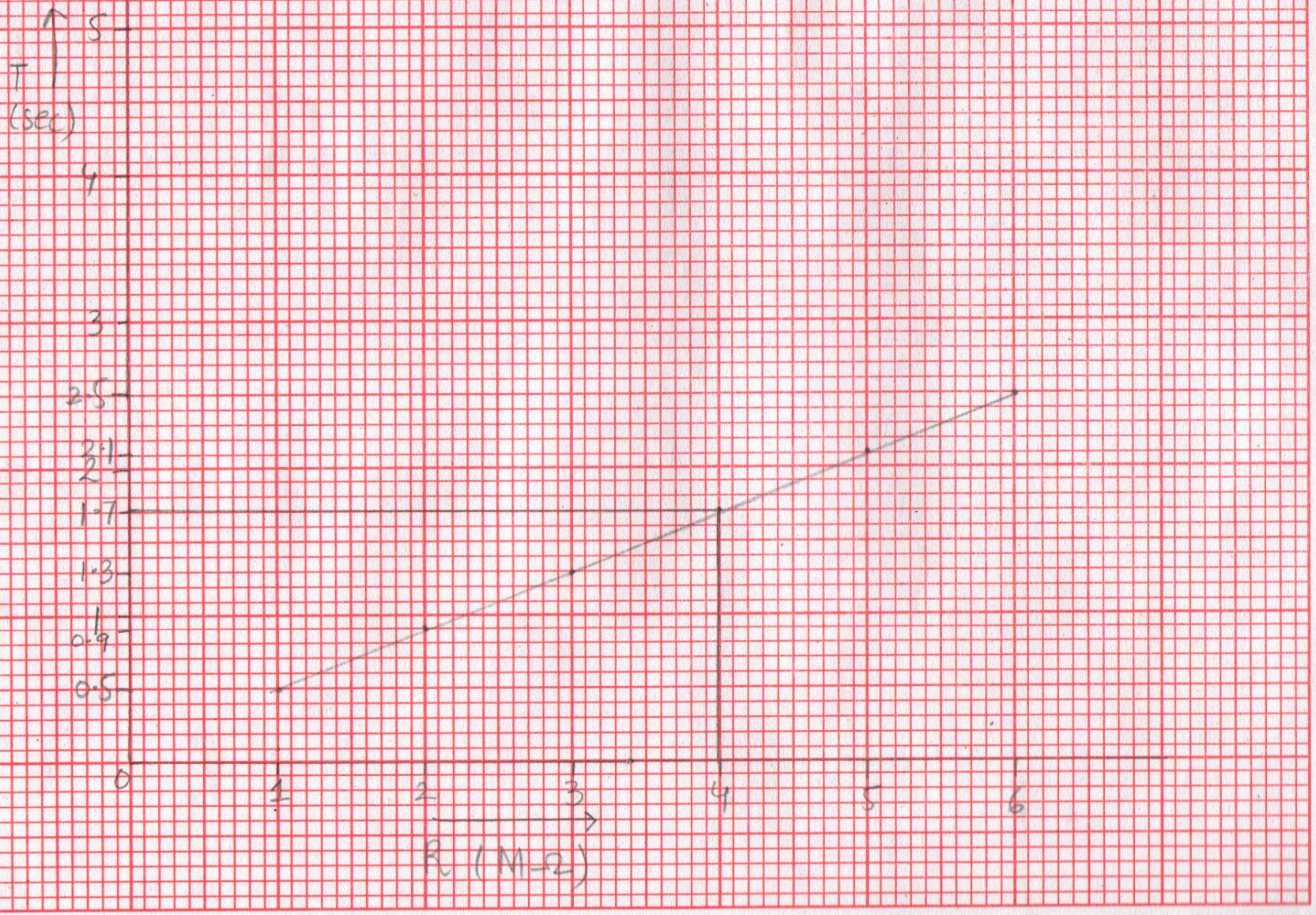
$= 0.1\,M\Omega$

Scale along y-axis

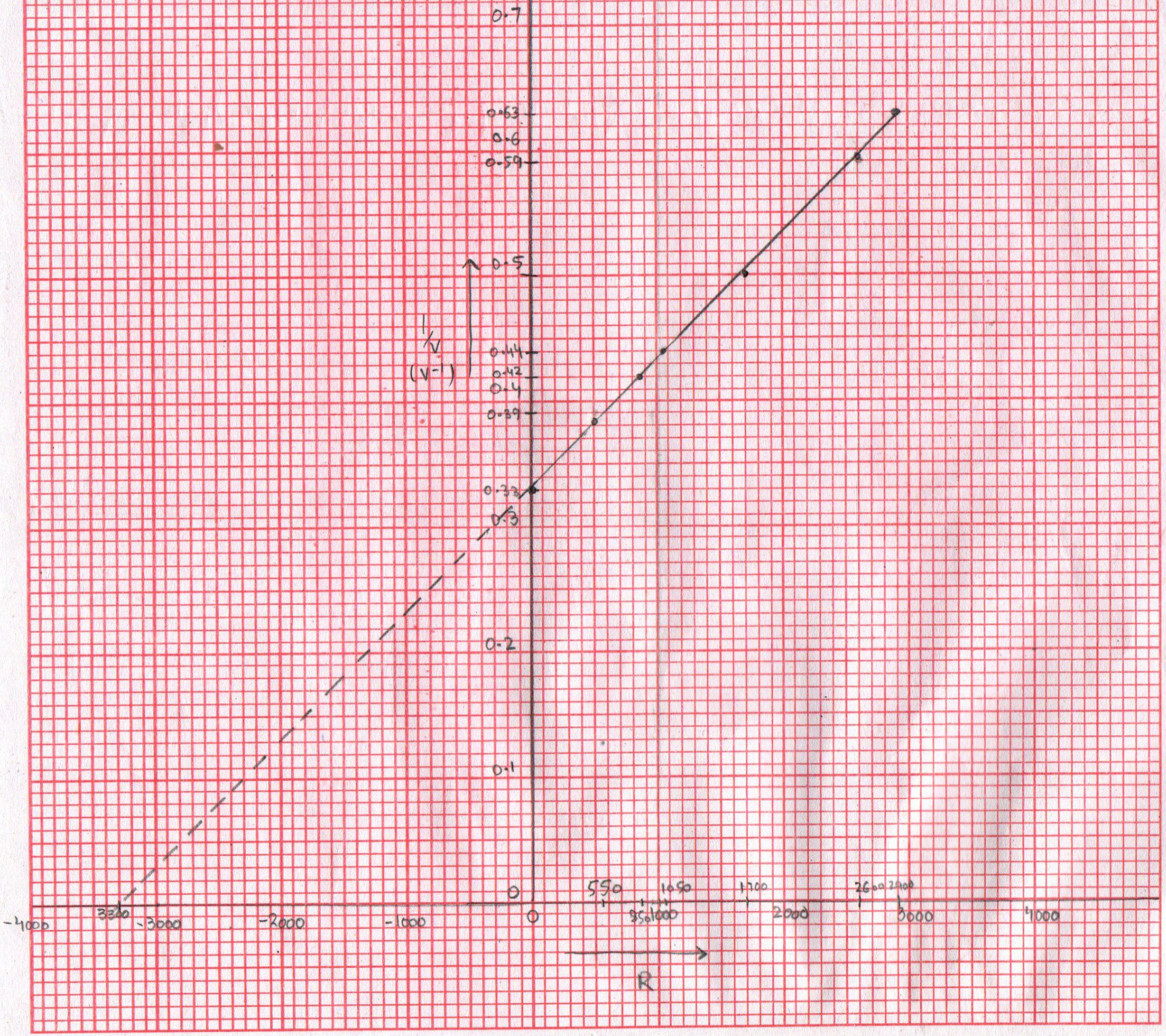
1 Big box $= 0.5$ sec

1 small box $= \frac{0.5}{10}$

$= 0.05$ sec



High resistance R(MΩ)	1	2	3	4	5	6
Time period T (sec)	0·5	0·9	1·3	1·7	2·1	2·5


0·7
0·63
0·6
0·59
0·5
1/V (V⁻¹)
0·44
0·42
0·4
0·39
0·33
0·3
0·2
0·1
0
550
1050
1700
2600
2400
-4000
3300
-3000
-2000
-1000
0
850 1000
2000
3000
4000
R

R(Ω)	0	550	850	1050	1700	2600	2900
1/V (volt^{-1})	0.33	0.39	0.42	0.44	0.50	0.59	0.63

Scale along x-axis:

1 Big Box = 1000 Ω

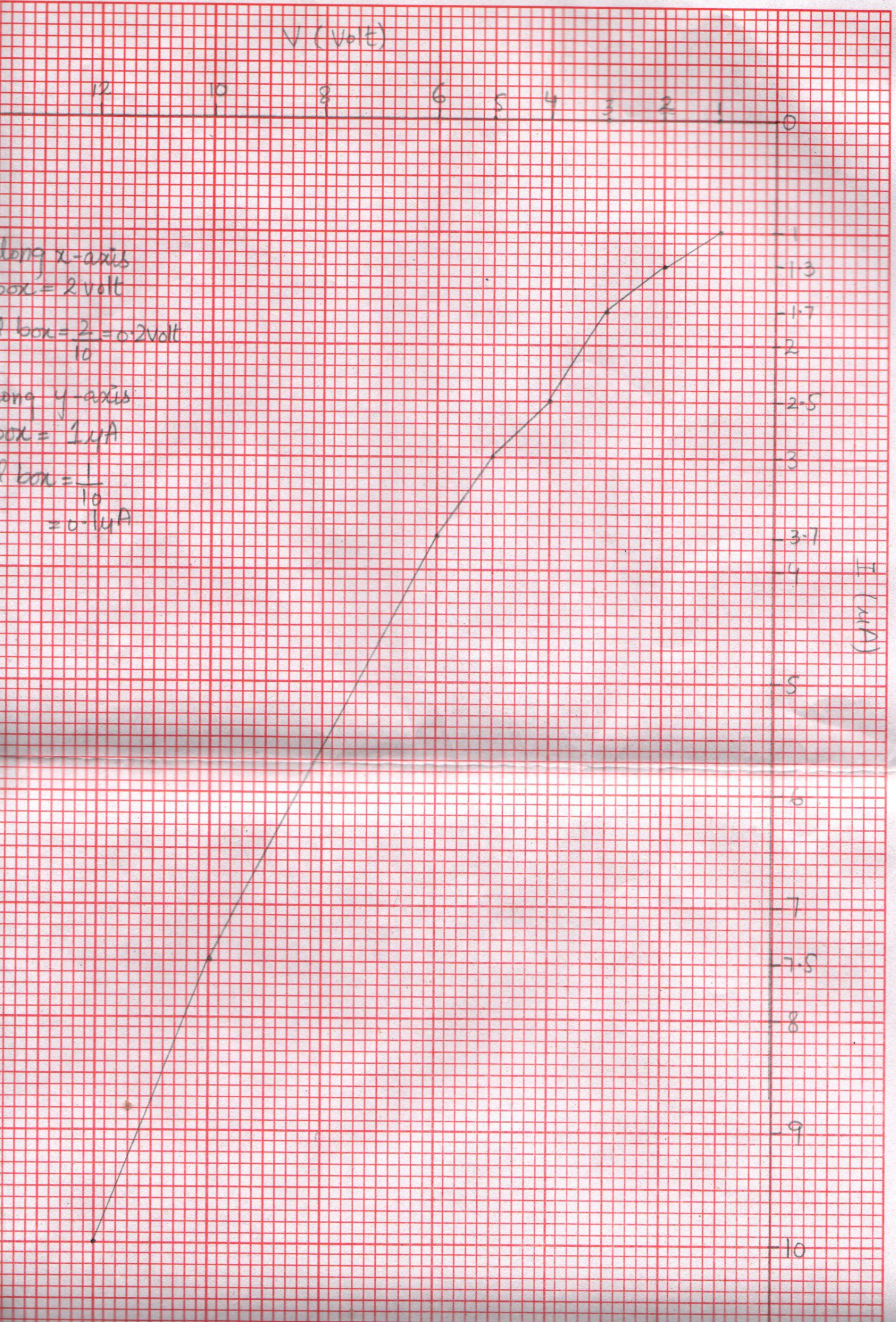
1 small Box = $\frac{1000}{10}$ = 100 Ω

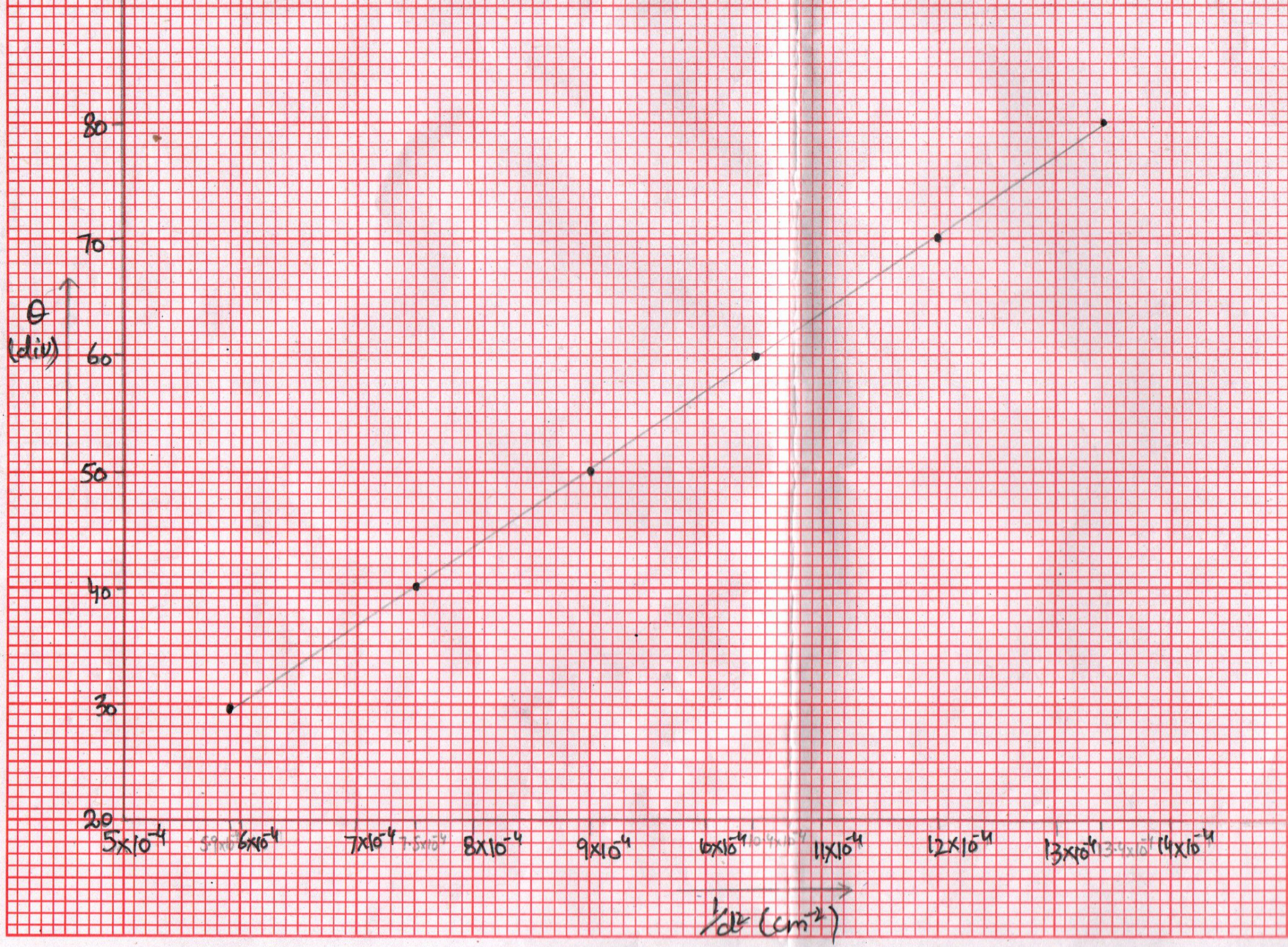
Scale along y-axis:

1 Big Box = $0.1\ V^{-1}$

1 small box = $\frac{0.1}{10} = 0.01\ V^{-1}$

Reverse Voltage (Volt)	1	2	3	4	5	6	10	12
Reverse current I (μA)	1	1·3	1·7	2·5	3	3·7	7·5	10


V (Volt)
12
10
8
6
5
4
3
2
1
0
I (μA)
1
1·3
1·7
2
2·5
3
3·7
4
5
6
7
7·5
8
9
10
long x-axis
box = 2 volt
box = 2/10 = 0·2 volt
long y-axis
box = 1 μA
box = 1/10
= 0·1 μA



$\frac{1}{d^2}(cm^{-2})$	5.9×10^{-4}	7.5×10^{-4}	9×10^{-4}	10.4×10^{-4}	12×10^{-4}	13.4×10^{-4}
θ(div)	30	40	50	60	70	80

Scale along x-axis

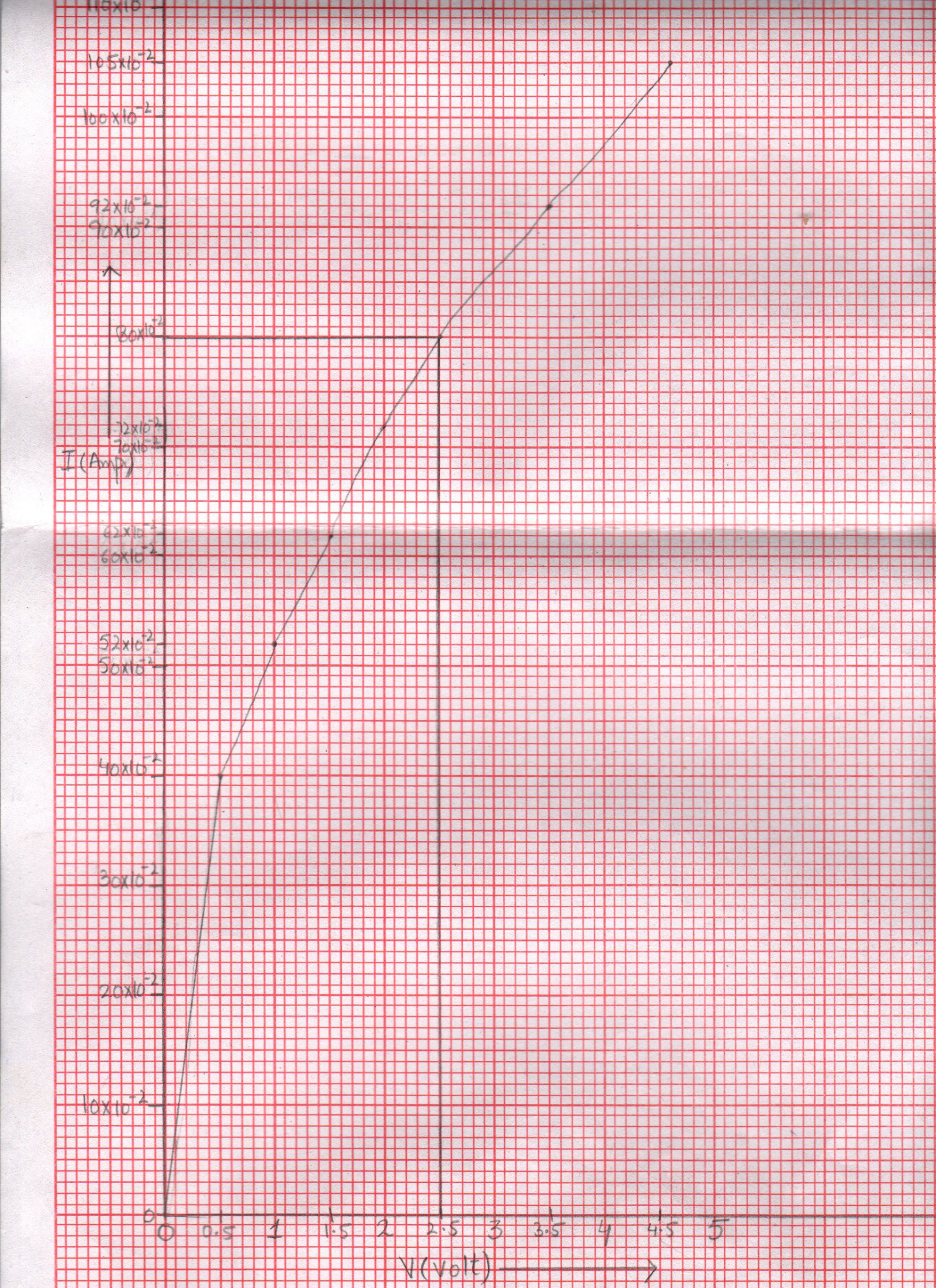
1 big box = $1\times10^{-4}\,cm^{-2}$

1 small box = $\frac{1\times10^{-4}}{10} = 0.1\times10^{-4}\,cm^{-2}$

Scale along y-axis

1 big box = 10 div

1 small box = $\frac{10}{10}$ = 1 div


110x10⁻²
105x10⁻²
100x10⁻²
92x10⁻²
90x10⁻²
80x10⁻²
72x10⁻²
70x10⁻²
I (Amp)
62x10⁻²
60x10⁻²
52x10⁻²
50x10⁻²
40x10⁻²
30x10⁻²
20x10⁻²
10x10⁻²
0
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5
V(volt)

Plot a graph between V and I using the given data.
What do you infer from graph OR Find resistance from graph

V(Volts)	0	0·5	1·0	1·5	2·0	2·5	3·5	4·5
I(Ampere)	0	0·40	0·52	0·62	0·72	0·80	0·92	1·05

Scale along y-axis

1 Big Box $= 10 \times 10^{-2}$ Amp

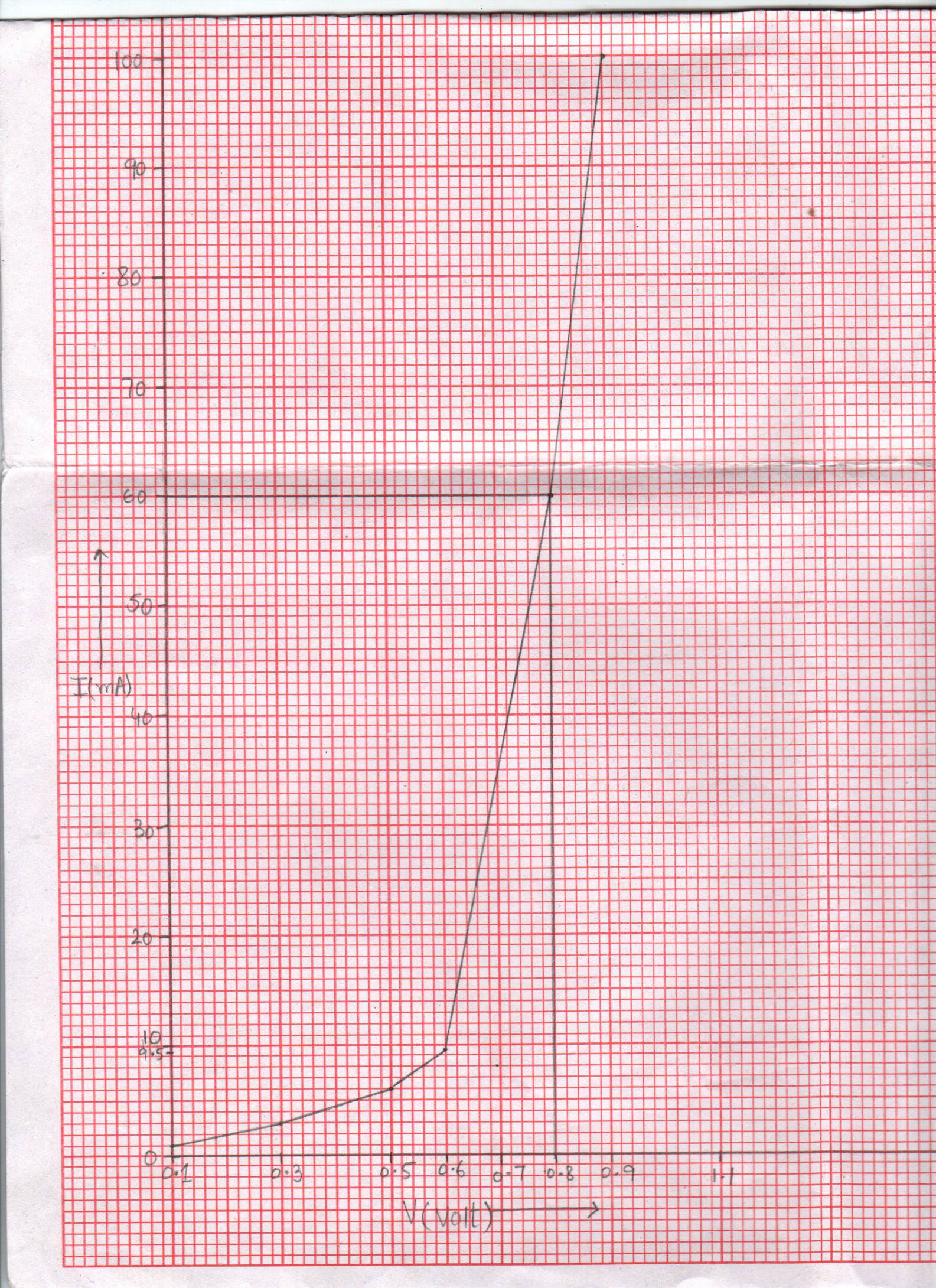
1 small box $= \frac{10 \times 10^{-2}}{10} = 1 \times 10^{-2}$ Amp

Scale along x-axis

1 big box = 1 volt

1 small box $= \frac{1}{10} = 0 \cdot 1$ volt

$R = \frac{V}{I} = \frac{2 \cdot 5}{80 \times 10^{-2}} = 3 \cdot 125$ ohm.


100
90
80
70
60
50
I(mA)
40
30
20
10
9.5
0
0.1
0.3
0.5
0.6
0.7
0.8
0.9
1.1
V(Volt)

Plot a graph between "V" and "I". Find Forward resistance for semiconductor diode.

V (volts)	0·1	0·3	0·5	0·6	0·8	0·9
I (mA)	1·0	3·0	6·0	9·5	60	100

Scale along x-axis :-

1 Big Box = 0·2 Volt

1 small Box = $\frac{0·2}{10}$ = 0·02 volt

Scale along y-axis :-

1 Big Box = 10 mA

1 small Box = $\frac{10 mA}{10}$ = 1 mA

$R = \frac{V(\text{Volt})}{I(mA)} = \frac{0·8}{60 \times 10^{-3}} = 13·3 \text{ ohm}$