Zadatak 1. Električna provodnost u dvije dimenzije (10 poena)

Napišite brojeve od 0 do 9 u sljedeću tabelu

0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**

Dio A. Mjerenje M4T metodom (1,2 poena)

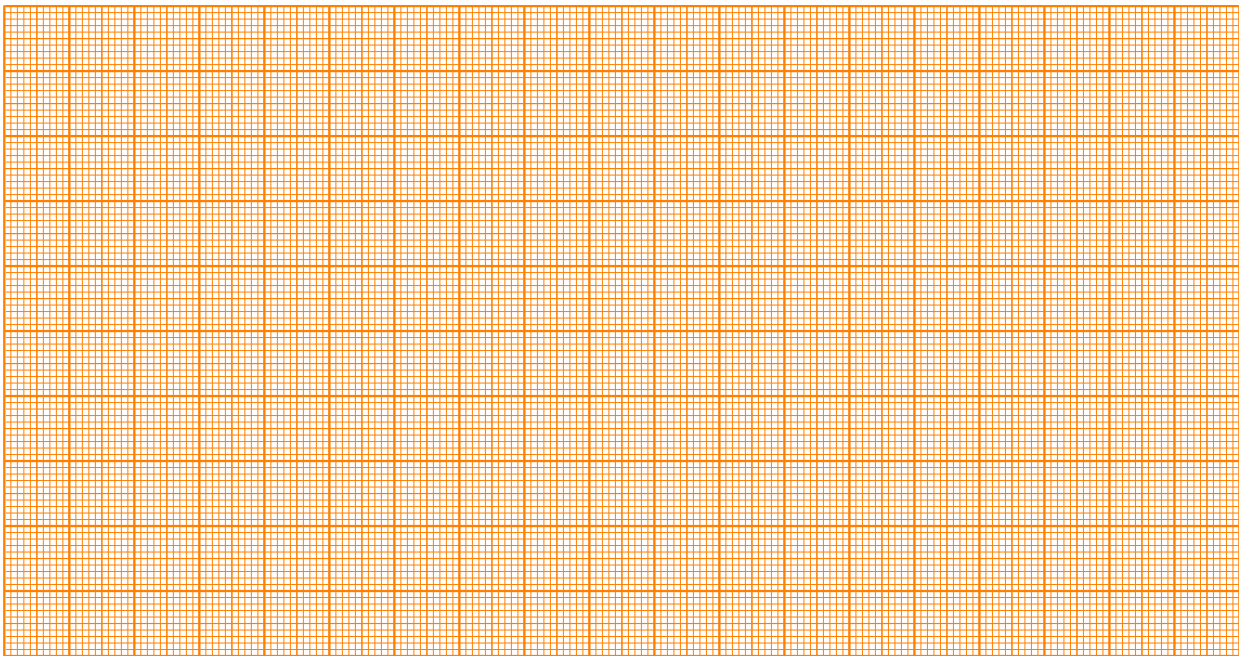
A.1 (0.6 pt)

$s =$

I	V	I	V

Nacrtajte vaša mjerenja na **Grafiku A.1**.

Grafik A.1: I vs. V



A.2 (0.2 pt)

$R =$

A.3 (0.4 pt)

$\Delta R =$

Dio B. Specifična površinska otpornost (0.3 poena)

B.1 (0.3 pt)

$\rho_{\square} \equiv \rho_{\infty} =$

Dio C. Mjerenja za različite dimenzije uzorka (3.2 poena)

C.1 (3 pt)

$s =$

$\rho_\infty =$

Prazne kolone se mogu koristiti za međurezultate.

w/s						$\hat{R}$

C.2 (0.2 pt)
Koristite Tabelu **C.1** za vaše rezultate

Dio D. Geometrijski korektivni faktor (1.9 poena)

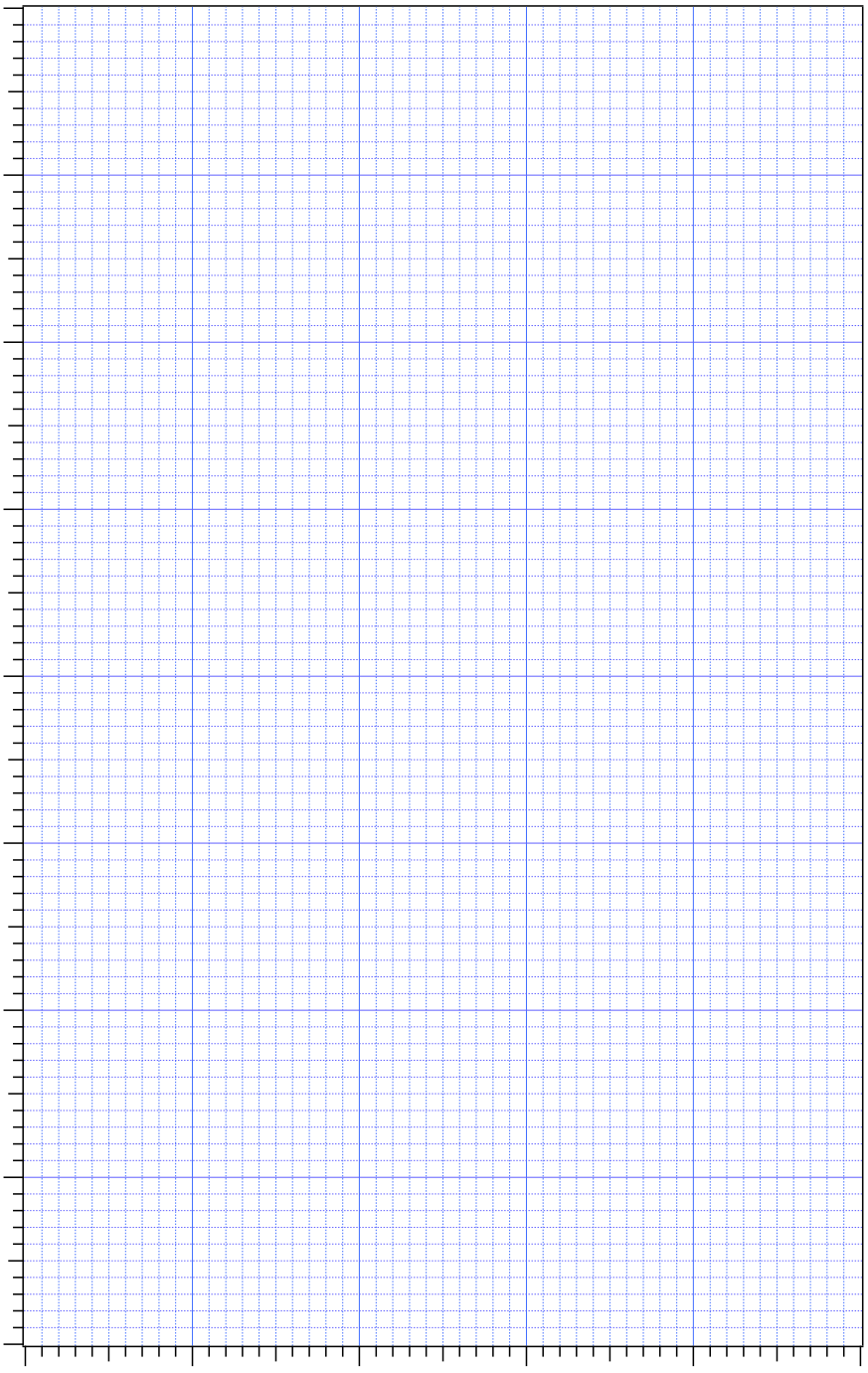
D.1 (1.0 pt)
Nacrtajte vaša mjerenja na odgovarajućem grafičkom papiru: linearnom (Grafik **D.1a**), polu-logaritamski (**D.1b**) **ili** log-log (**D.1c**) na sljedećim stranicama.

D.2 (0.9 pt)

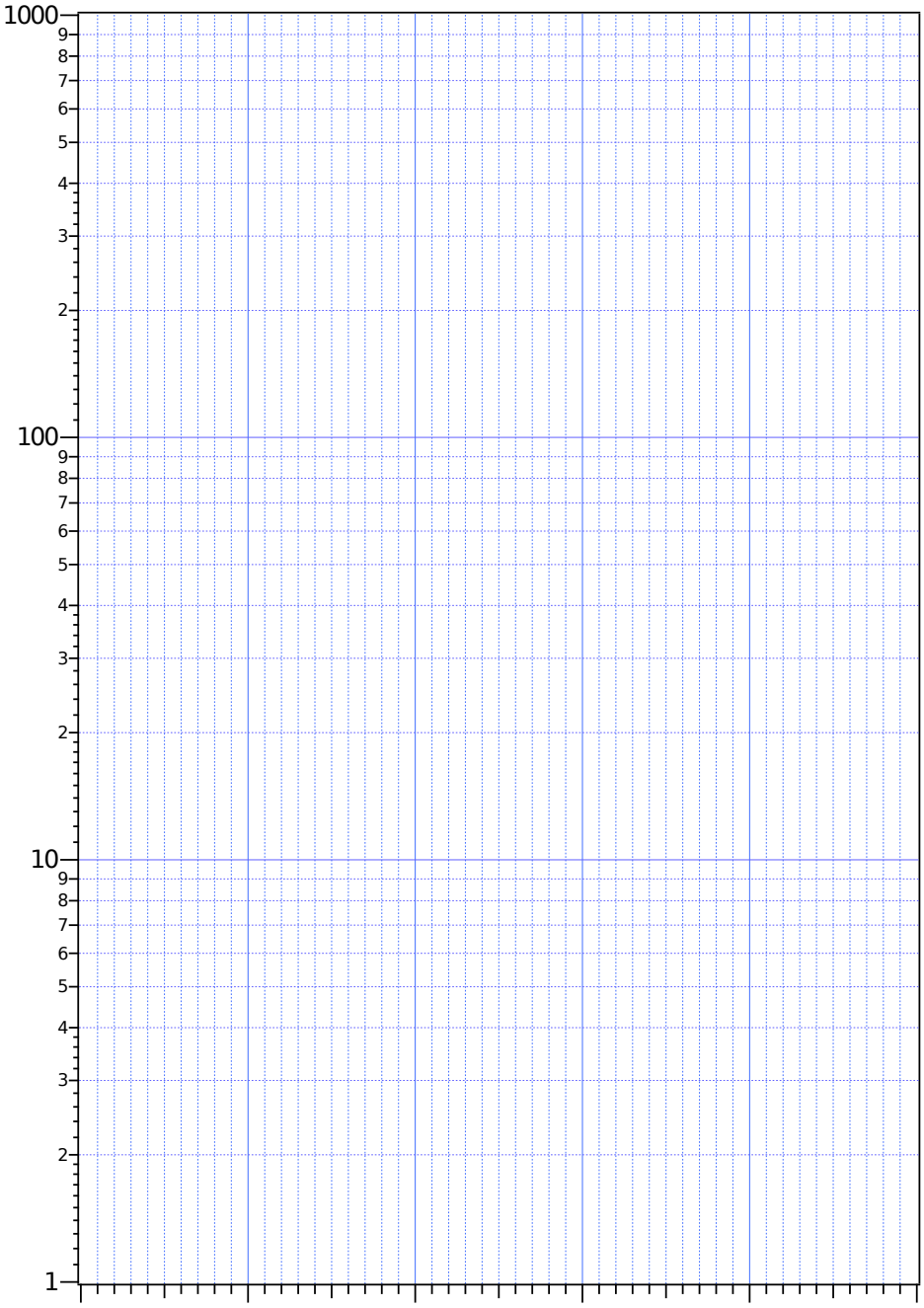
$a =$

$b =$

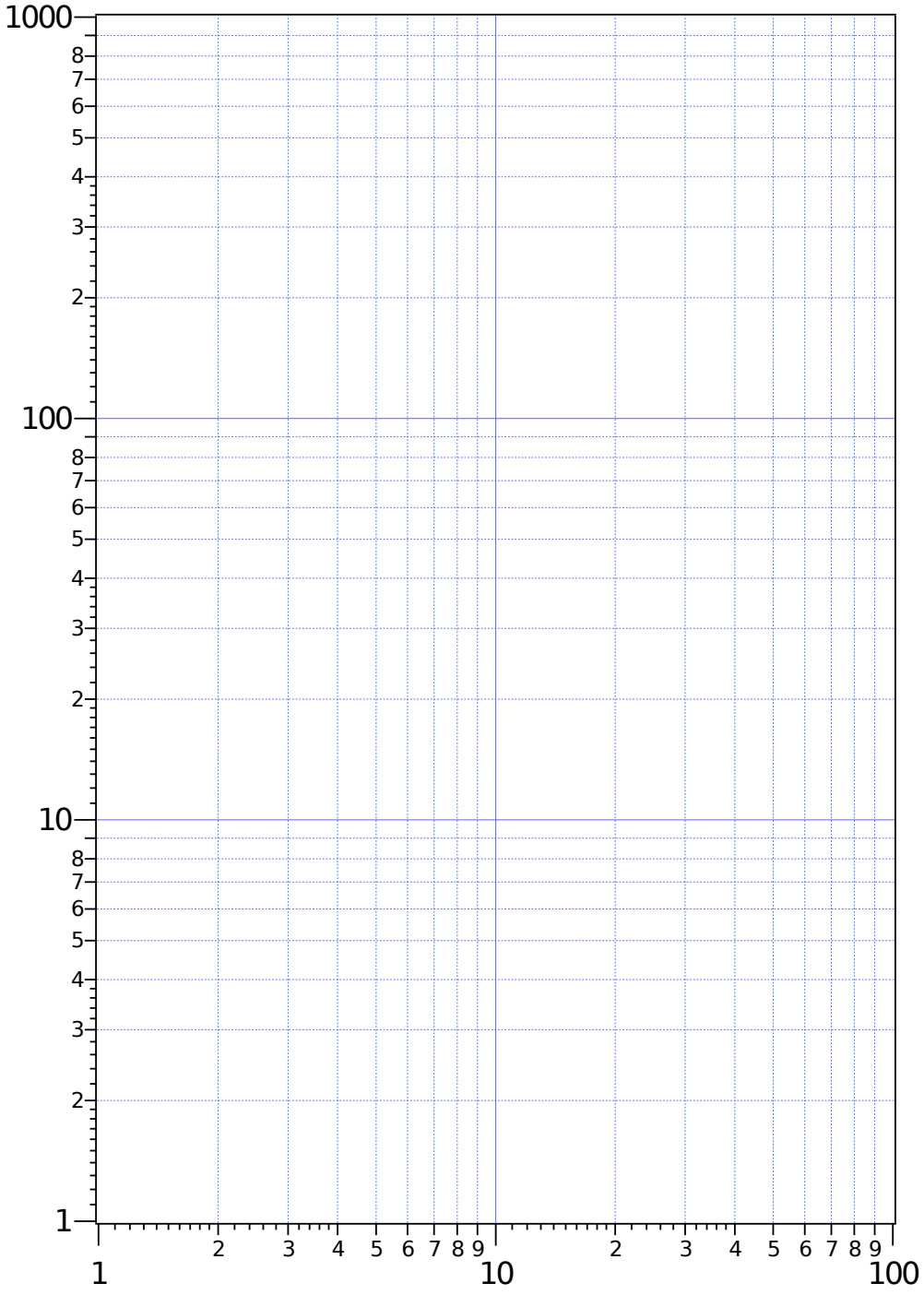
Grafik D.1a: linearna skala:



Grafik D.1b: semi-logaritamska skala:



Grafik D1c: log-log skala:



Dio E. Silikonski vafer i van der Pauw-metod (3.4 poena)

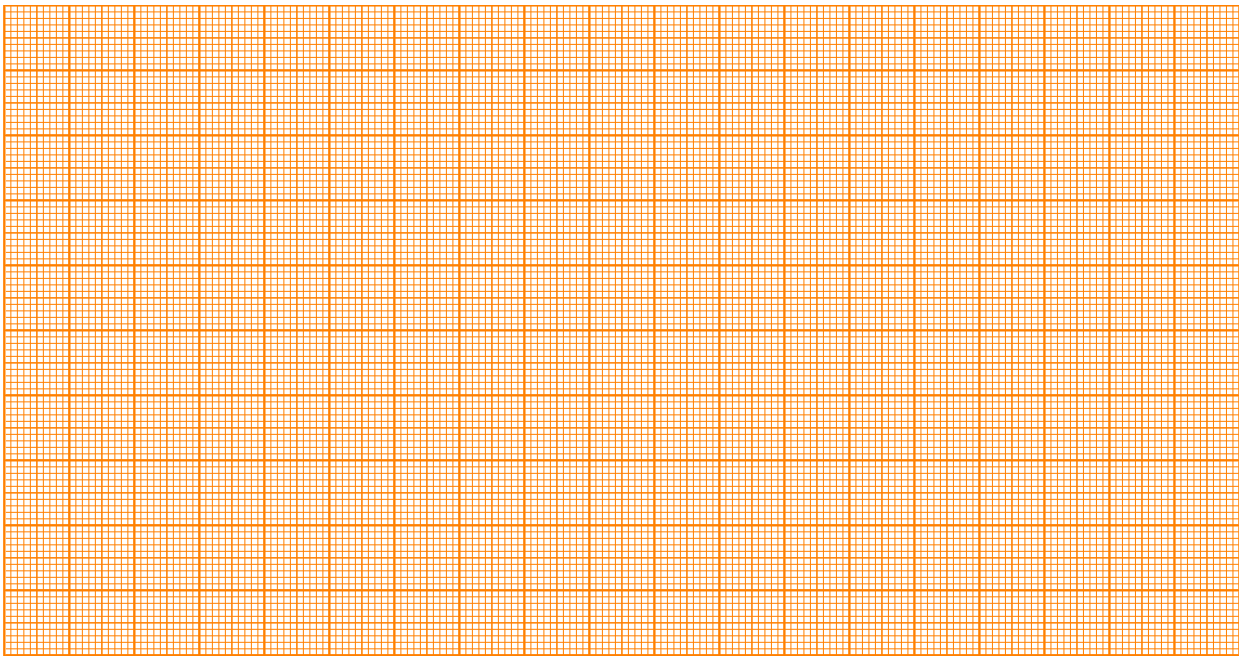
Zapišite broj vašeg vafera ovdje:

E.1 (0.4 pt)

I	V	I	V

E.2 (0.4 pt)

Grafik E.2: I vs V



$R_{4PP} =$

E.3 (0.2 pt)

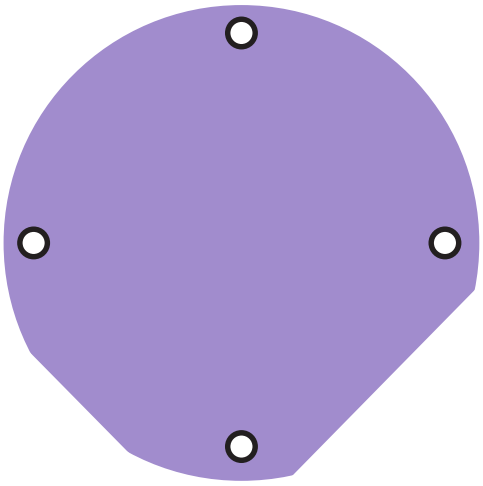
$w =$ $\rightarrow w/s =$ $f(w/s) =$

E.4 (0.1 pt)

$\rho_{\square}(4\mathrm{PP})$

E.5 (0.6 pt)

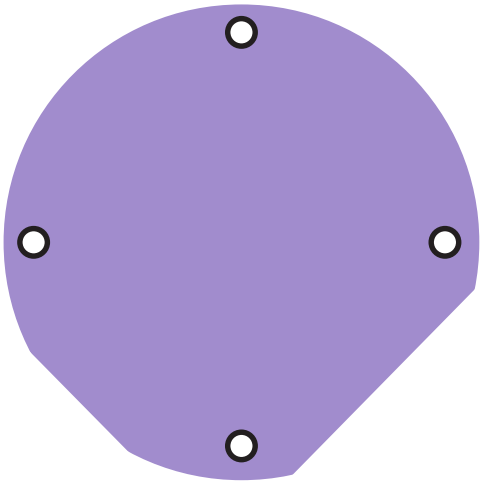
Skicirajte (smjer struje):



I	V

E.6 (0.6 pt)

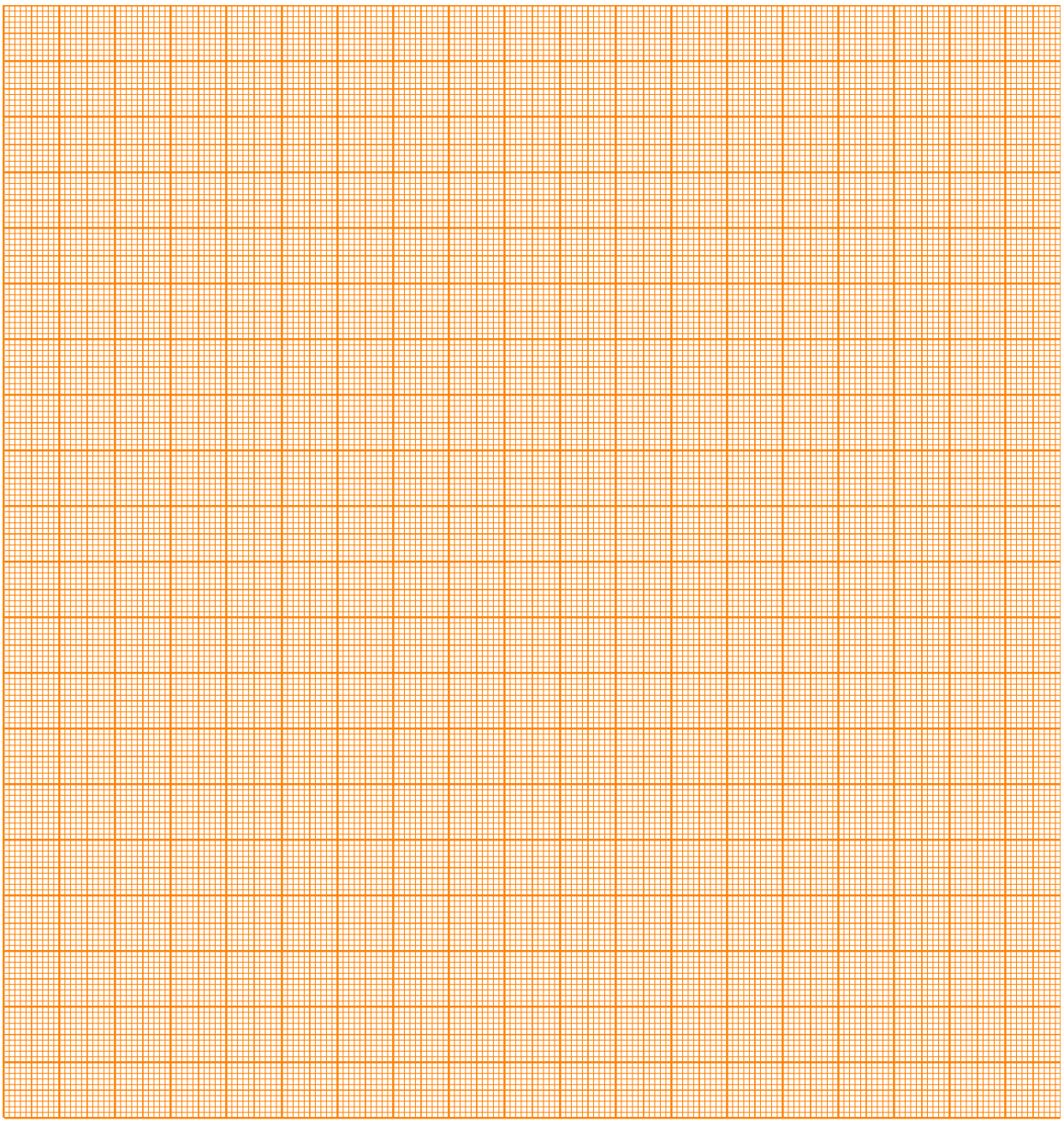
Skicirajte (smjer struje):



I	V

E.7 (0.5 pt)

Grafik E.7: I vs. V



$\langle R \rangle =$

E.8 (0.4 pt)
Račun:

$\rho_{\square}(\mathrm{vdP}) =$

E.9 (0.1 pt)

$\frac{\Delta\rho_{\square}}{\rho_{\square}(\mathrm{vdP})} =$ $=$ $\%$

E.10 (0.1 pt)

Specifična otpornost tankog Cr filma $\rho =$