

## Problem 1: Električna provodljivost u dvije dimenzije (10 poena)

Napišite brojeve od 0 do 9 u sljedećoj tabeli:

|          |          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> |
|          |          |          |          |          |          |          |          |          |          |

### Dio A. Mjerenje metodom četiri tačke (1.2 poena)

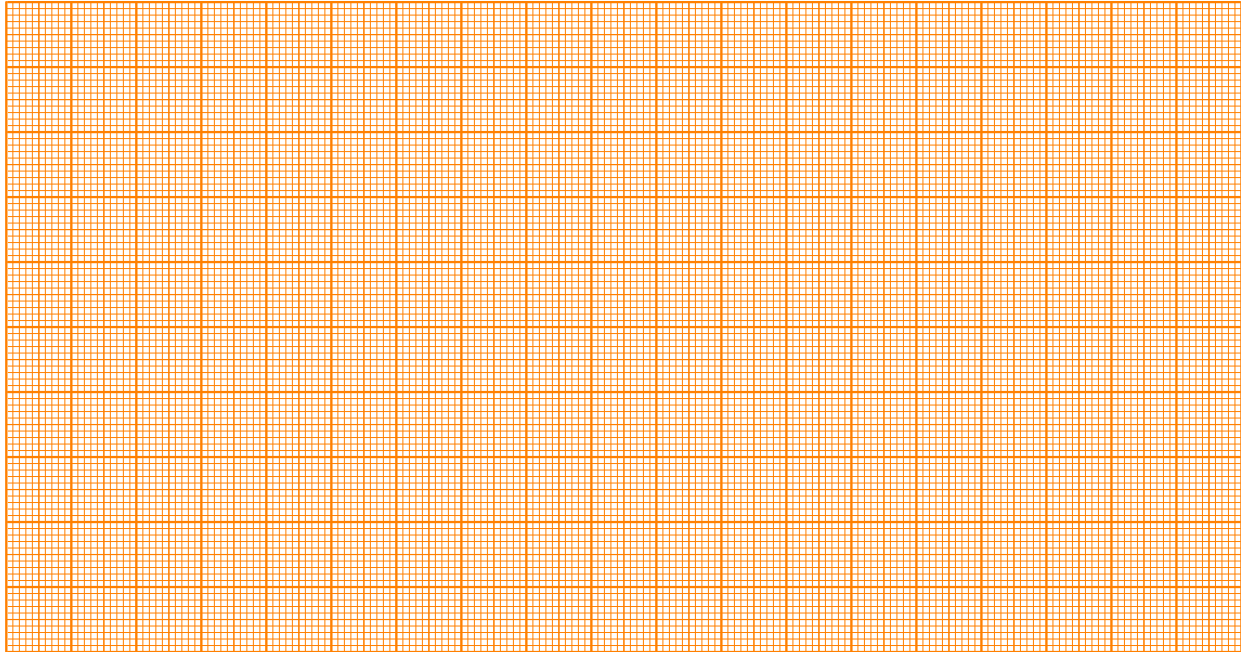
**A.1** (0.6 pt)

$s =$

| $I$ | $V$ | $I$ | $V$ |
|-----|-----|-----|-----|
|     |     |     |     |
|     |     |     |     |
|     |     |     |     |

Unesite vaša mjerenja na **Grafik A.1**.

**Grafik A.1:**  $I$  vs.  $V$



**A.2** (0.2 pt)

$$R =$$

**A.3** (0.4 pt)

$$\sigma_R =$$

## Dio B. Površinska otpornost (0.3 poena)

**B.1** (0.3 pt)

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

## Dio C. Mjerenja za različite dimenzije uzoraka (3.2 poena)

**C.1** (3 pt)

$s =$

$\rho_{\infty} =$

Prazne kolone mogu se koristiti za pisanje rezultate međukoraka.

| $w/s$ |  |  |  |  |  |  |  |
|-------|--|--|--|--|--|--|--|
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |
|       |  |  |  |  |  |  |  |

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

## Part D. Faktor geometrijske korekcije (1.9 poena)

### D.1 (1.0 pt)

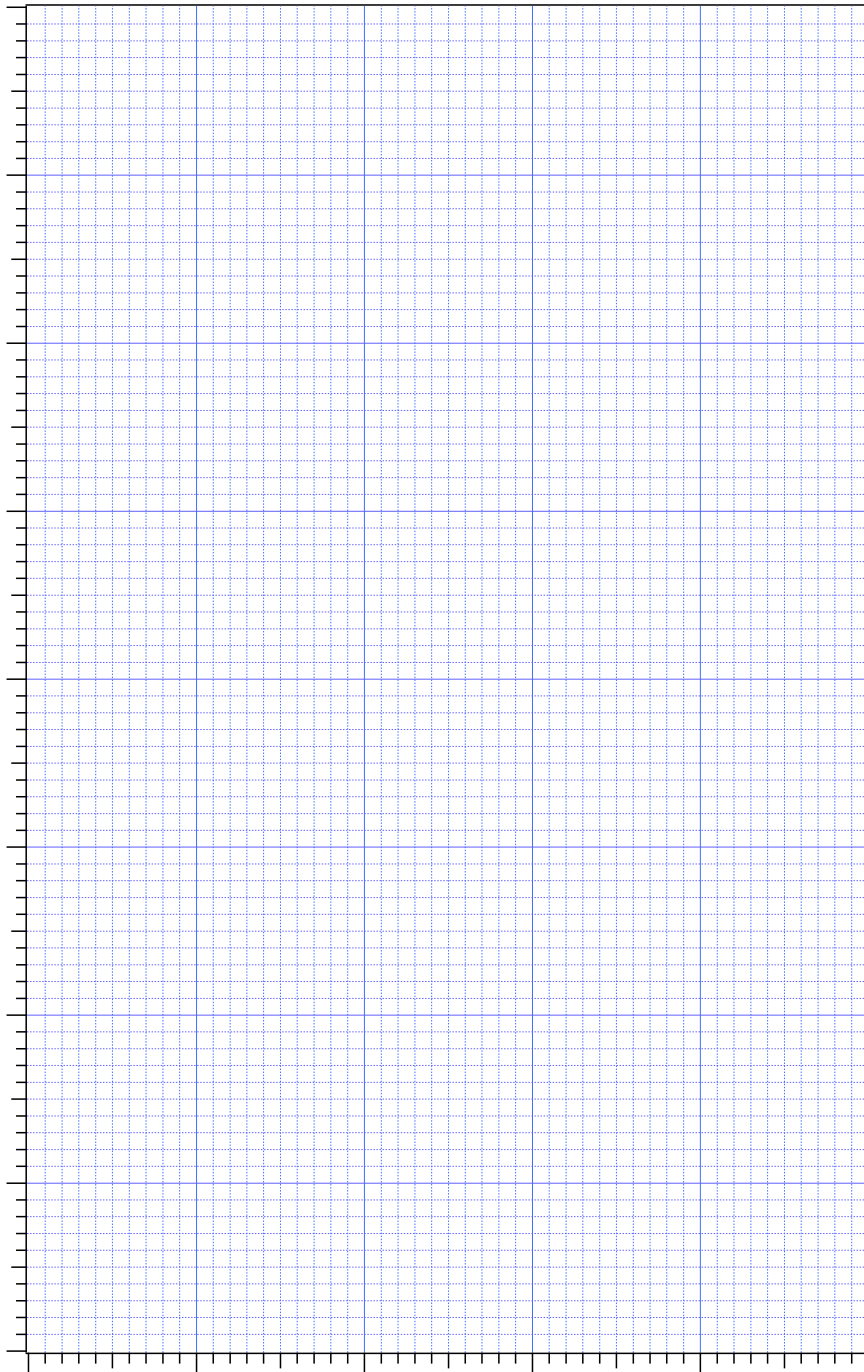
Ucrtajte vaše podatke na odgovarajući milimetarski papir: linearni (**Grafik D.1a**), polu-logaritamski (**D.1b**) ili dupli-logaritamski (log-log) (**D.1c**), koji se nalaze na sljedećim stranicama.

### D.2 (0.9 pt)

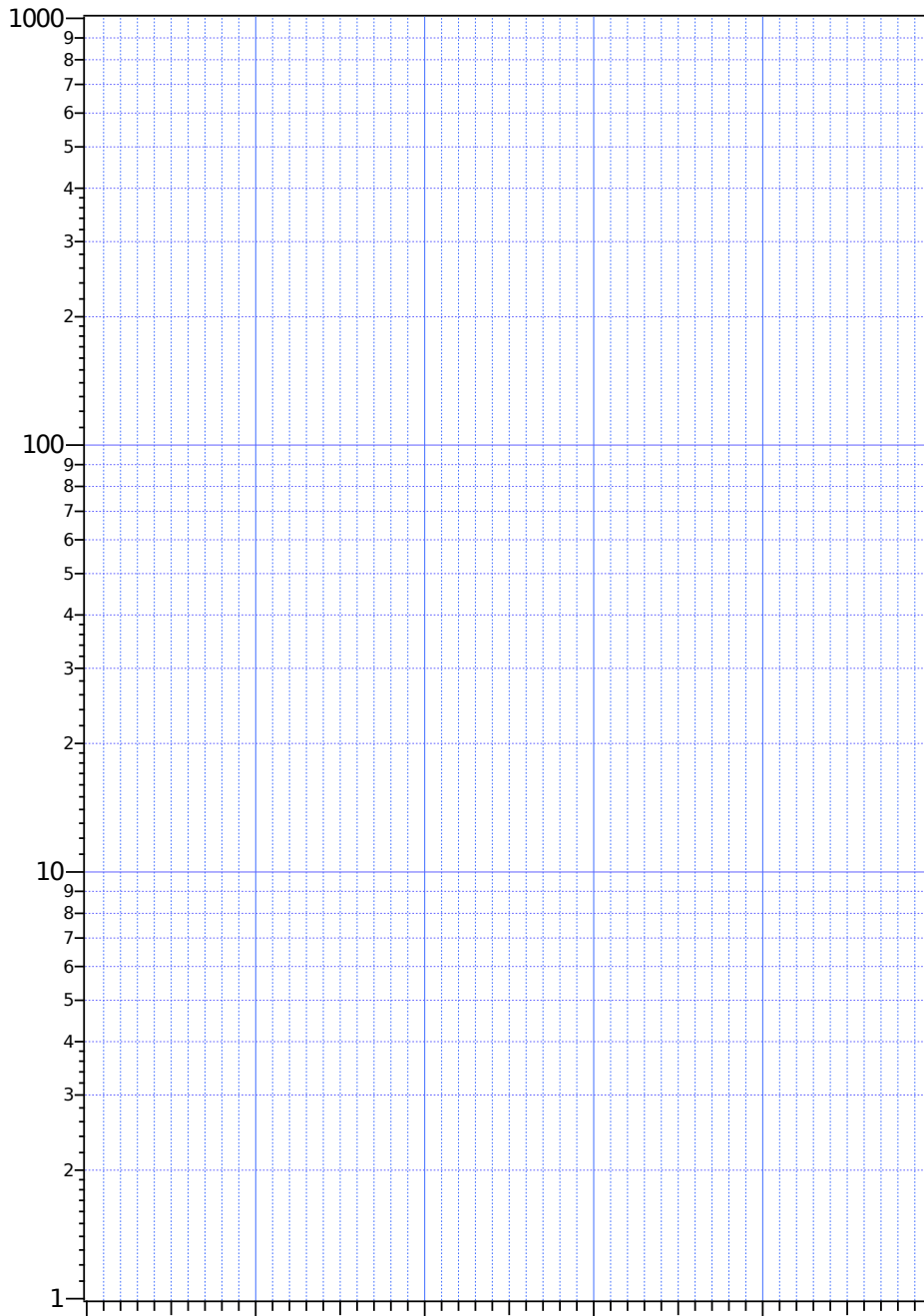
$a =$

$b =$

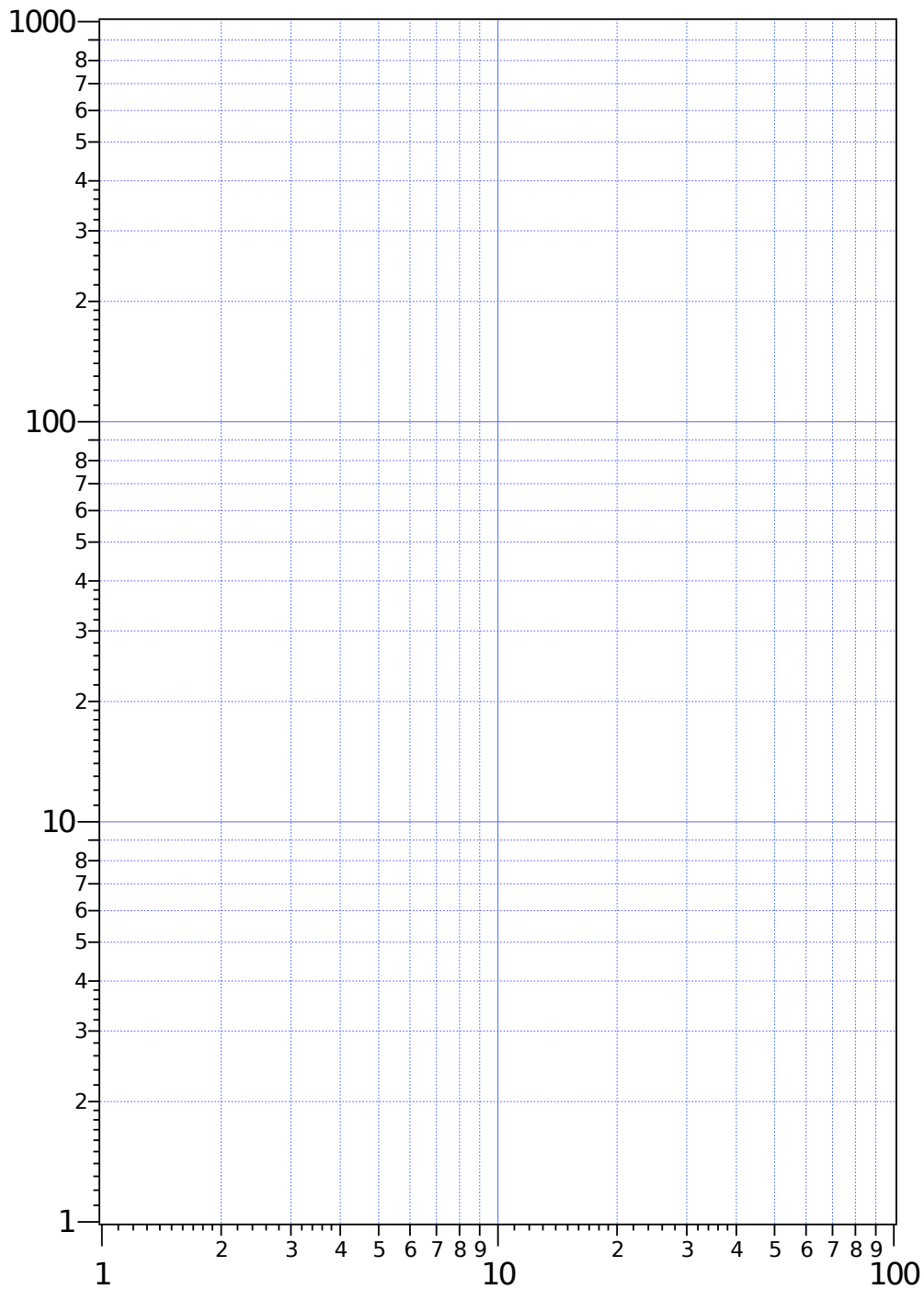
**Grafik D.1a: linearna skala:**



Grafik D.1b: polu-log skala:



Grafik D1c: log-log ili dupla-log skala:



**Dio E. Silicijski vafer i van der Pauw metoda (3.4 poena)**

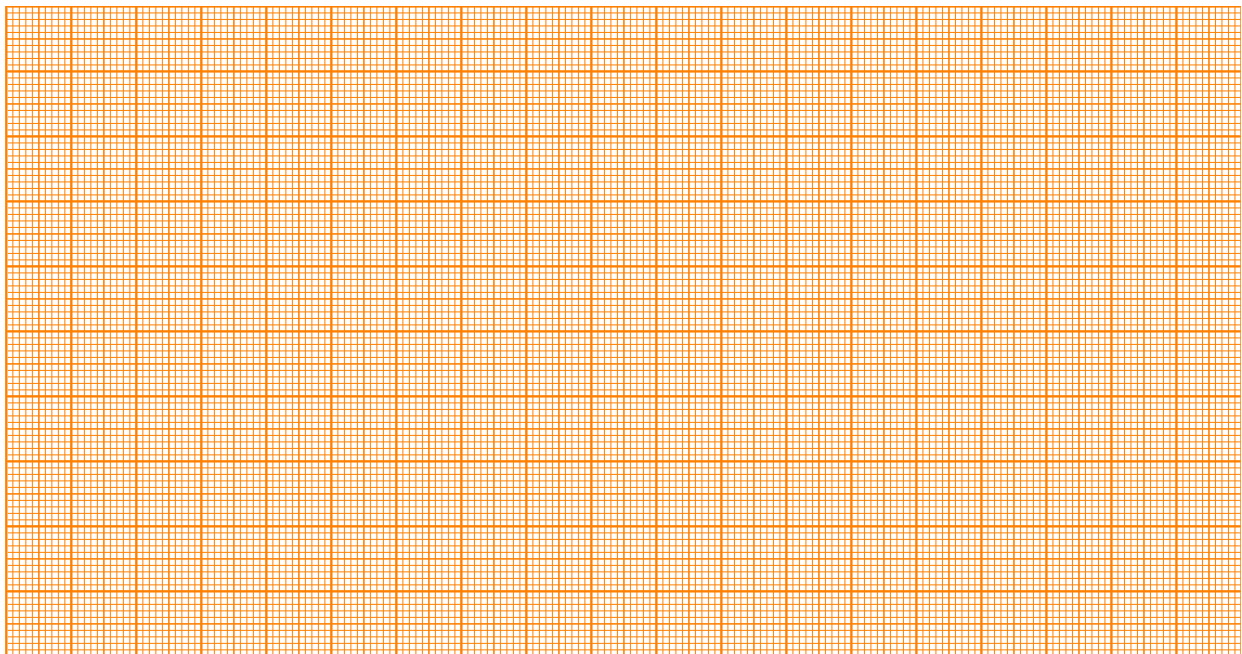
Napišite broj svog vafera ovdje:

**E.1** (0.4 pt)

| $I$ | $V$ | $I$ | $V$ |
|-----|-----|-----|-----|
|     |     |     |     |
|     |     |     |     |
|     |     |     |     |

**E.2** (0.4 pt)

**Grafik E.2:**  $I$  vs  $V$



$R_{4PP} =$

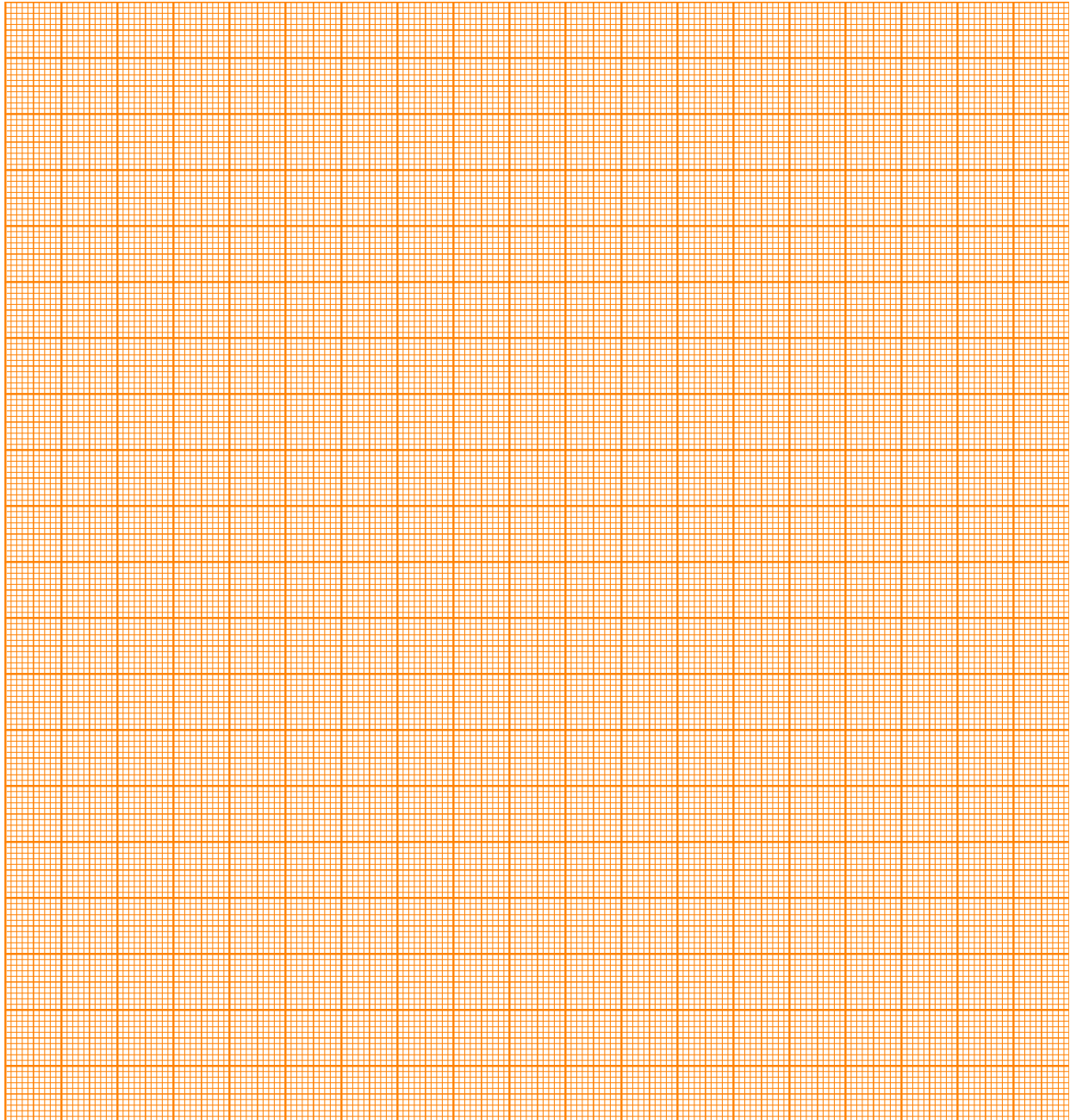






**E.7** (0.5 pt)

**Grafik E.7:**  $I$  vs.  $V$



$\langle R \rangle =$

**E.8** (0.4 pt)

Račun (za dobivanje rezultata):

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

**E.9** (0.1 pt)

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

**E.10** (0.1 pt)

Specifična otpornost Cr tankog filma  $\rho =$