

Schreibe die Ziffern 0 bis 9 in die folgende Tabelle:

0	1	2	3	4	5	6	7	8	9

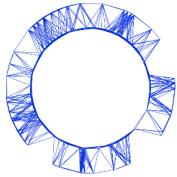
Teil A: Schaltungsdimensionierung (2,5 Punkte)

A.1 (0.2 pt)

$V_{\text{out}} =$

A.2 (0.5 pt)

#	R_{T1}	R_{T2}	R_{T3}
$\overline{R}$			
σ_R			



A.3 (0.3 pt)
Herleitung:

A.4 (0.4 pt)

$$R_{\square} = \quad \pm$$

$$\rho_{\text{Kohlenstofffilm}} = \quad \pm$$

A.5 (0.5 pt)
Herleitung:

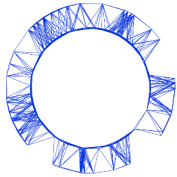
Messwerte:

$$R_1 =$$

$$R_2 =$$

$$\kappa =$$

Experiment



IPhO 2018
Lisbon, Portugal

A1-3

Austrian German (Austria)

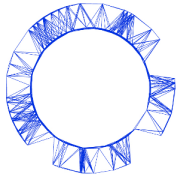
A.6 (0.3 pt)

R_1 Punkte	R_x	R_y	R_2 Punkte	R_x	R_y
Z			Z		
A			H		
B			I		
C			J		
D			K		
E			L		
F			M		
G			N		
V			W		

A.7 (0.3 pt)

Punkte	V_{out}	Punkte	V_{out}
A		H	
B		I	
C		J	
D		K	
E		L	
F		M	
G		N	
V		W	

Experiment



IPhO 2018
Lisbon, Portugal

A1-4

Austrian German (Austria)

Teil B: Kennlinien des JFET-Transistors (4,0 Punkte)

B.1 (0.2 pt)

$I_{DS} =$

B.2 (0.8 pt)

I_{DS} Stromstärken:

Gate/Drain	Z	H	I	J	K	L	M	N	W
Z									
A									

B.3 (0.2 pt)

A1-5
Austrian German (Austria)

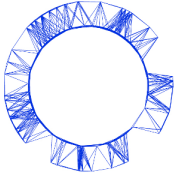
[illegible][illegible]

B.4 (cont.)

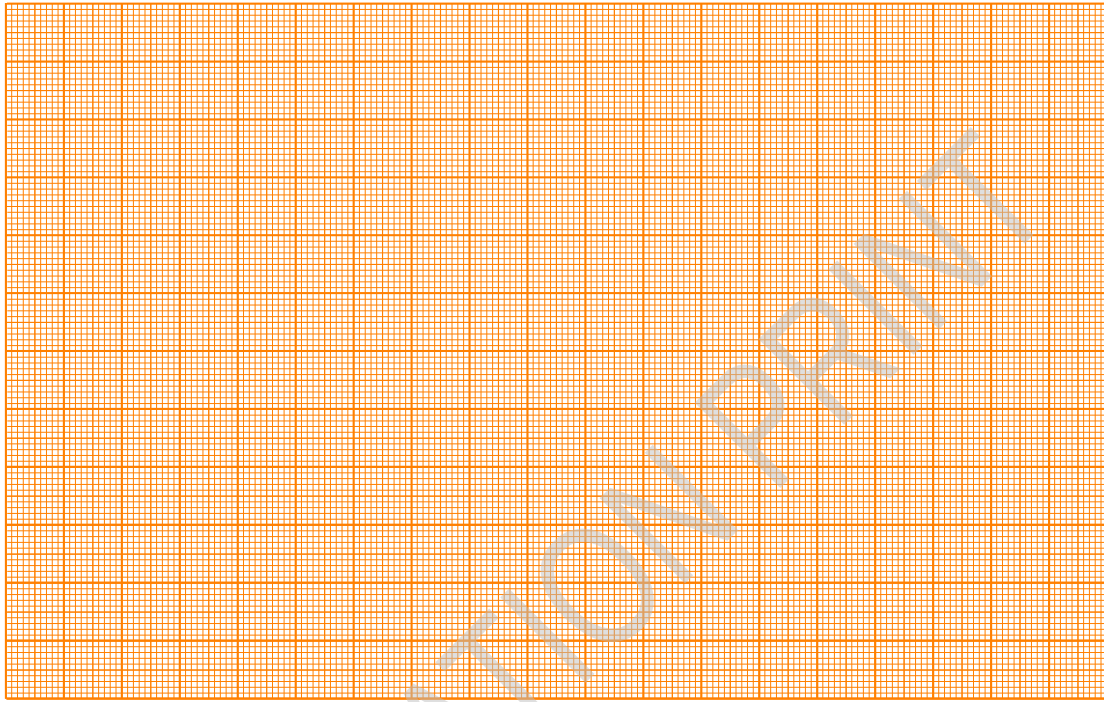
A1-7
Austrian German (Austria)

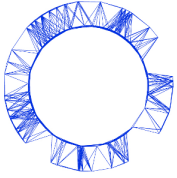
[illegible][illegible]

[illegible][illegible]

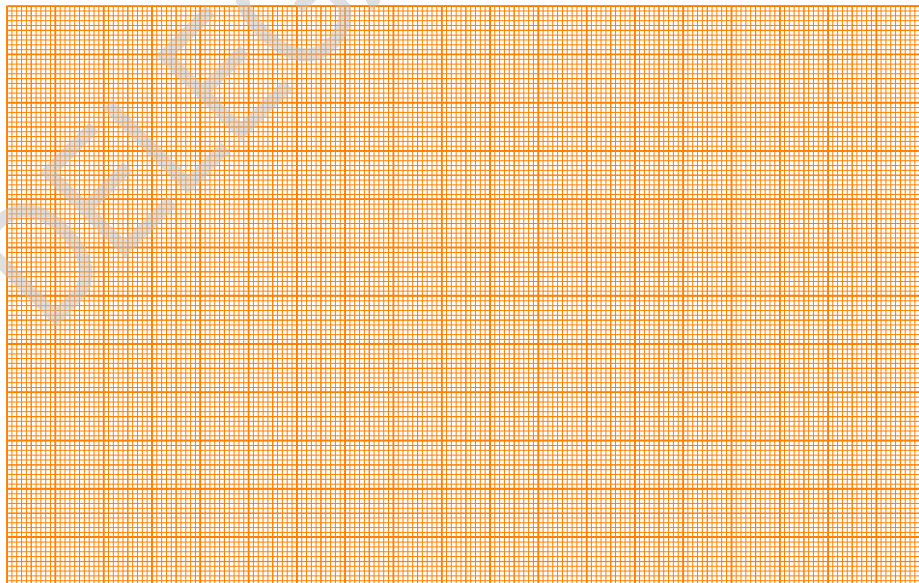


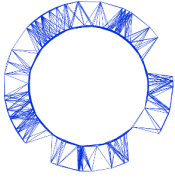
B.5 (0.5 pt)



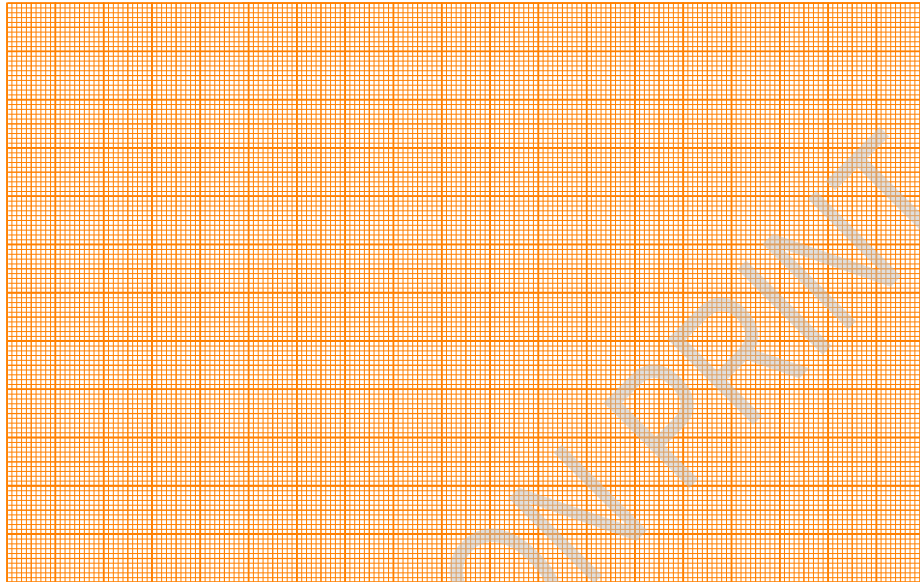


B.6 (0.5 pt)





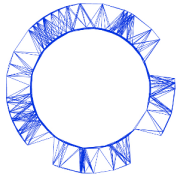
B.7 (0.3 pt)



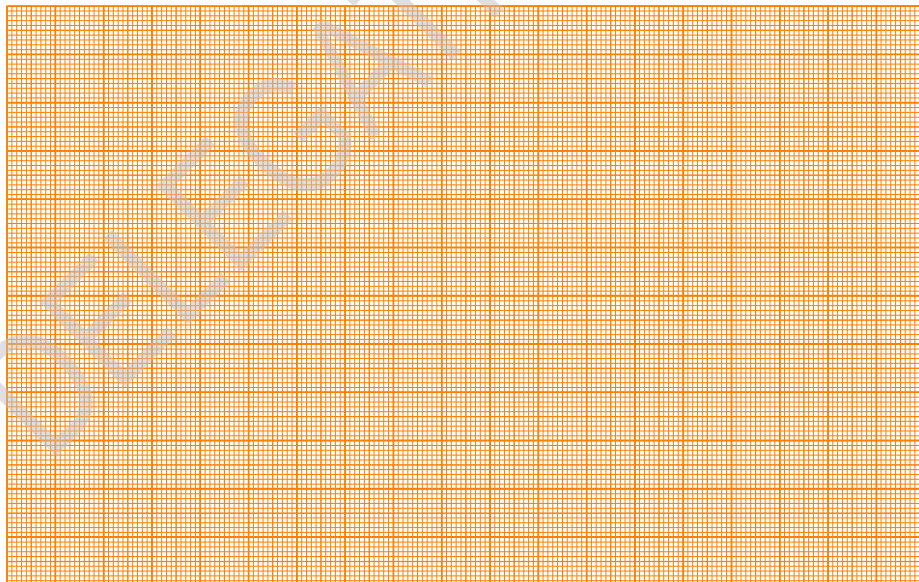
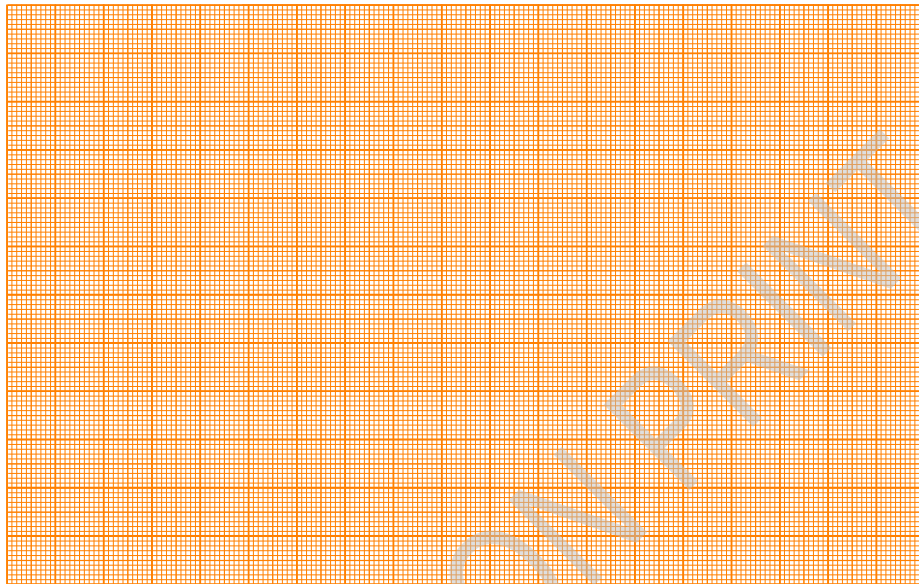
B.8 (0.4 pt)

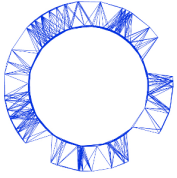
B.9 (0.4 pt)

[illegible]

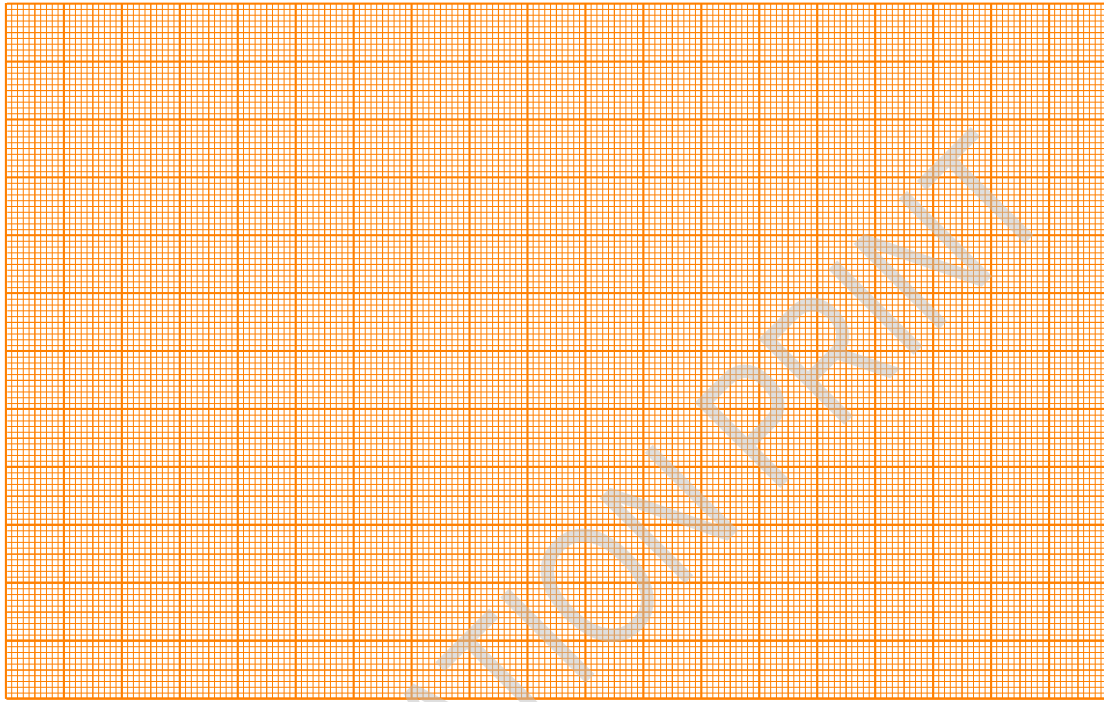


C.2 (1.2 pt)





D.2 (0.5 pt)



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