Part A. Sample X. Spectral measurements

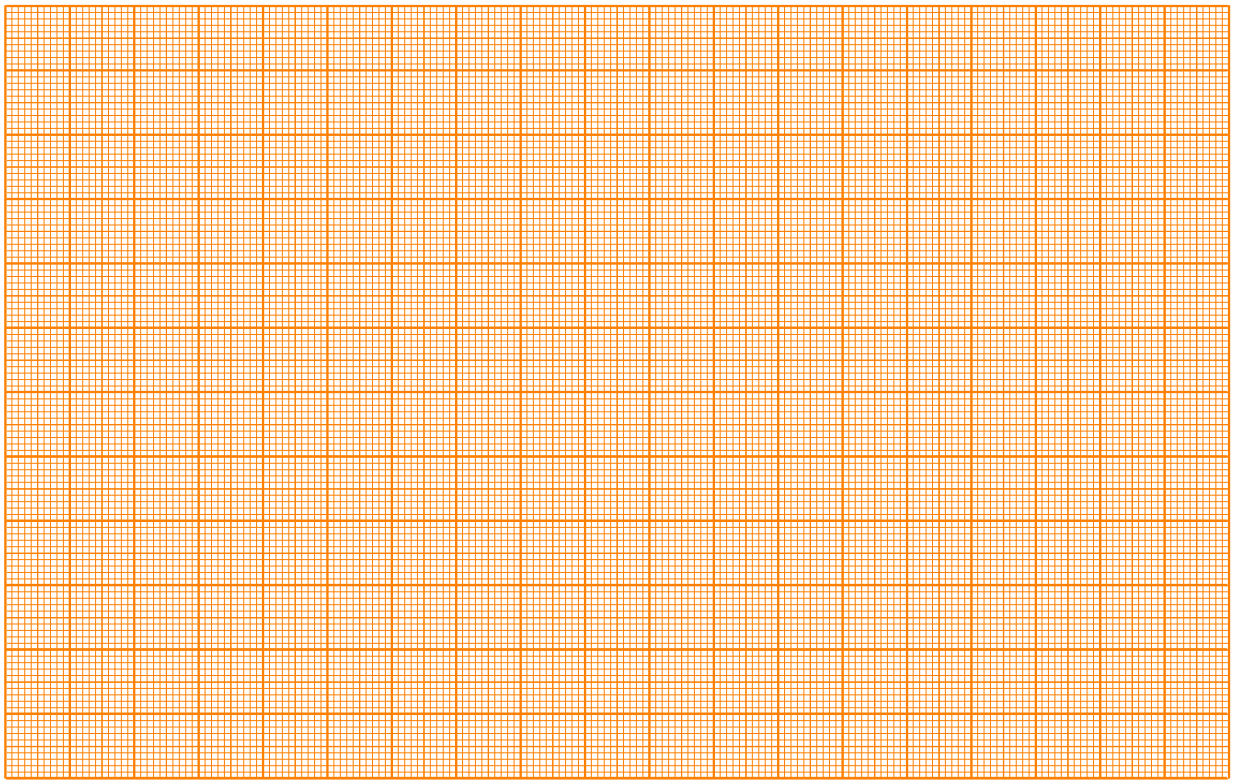
A.1 (0.1 pt)

$\varphi(\lambda) =$

A.2 (1.0 pt)

φ	θ				

A.3 (1.5 pt)



A.4 (0.9 pt)

$n_X =$

$D_X =$

Part B. Sample X. Laser measurements

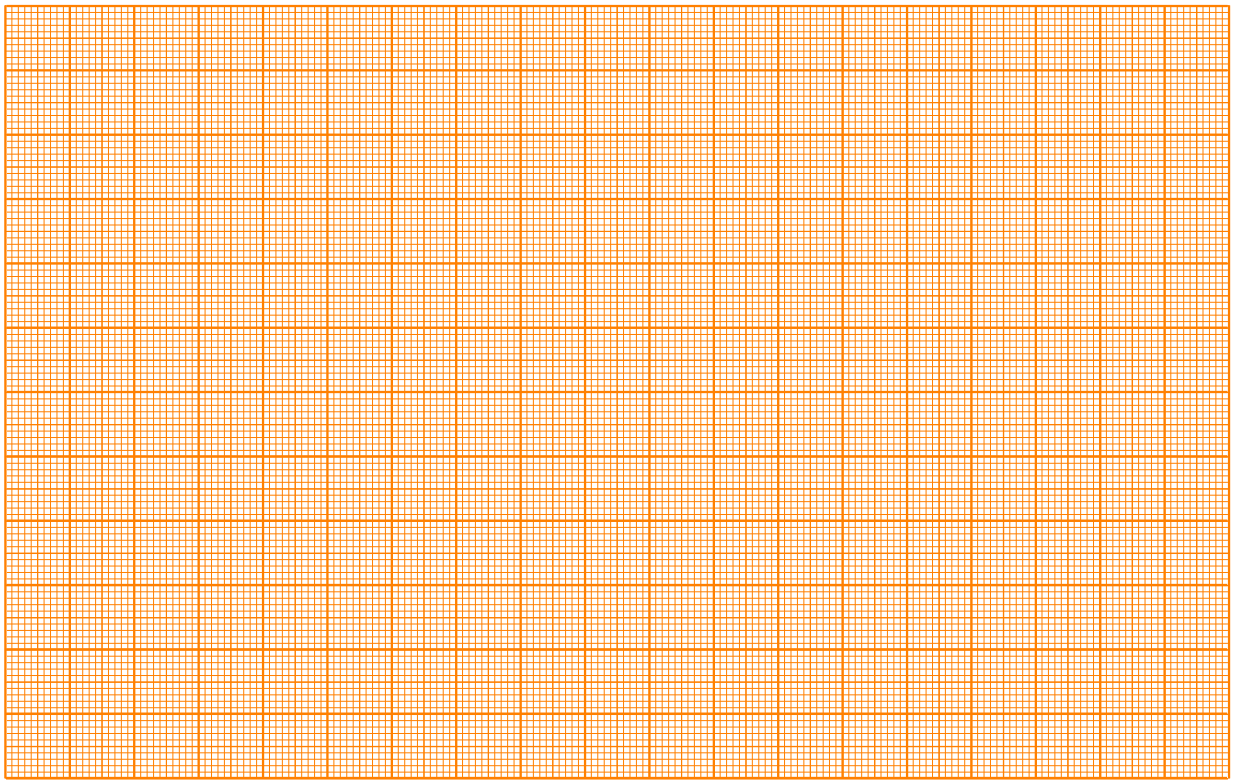
B.1 (0.1 pt)
Write down the wavelength of the chosen laser.

$\lambda =$

B.2 (1.0 pt)

θ	I_t				

B.3 (1.0 pt)



B.4 (0.2 pt)

$\theta_1 =$

$\Delta\theta_1 =$

B.5 (0.2 pt)

$\lambda_X =$

B.6 (0.6 pt)

$\Delta n_X =$

B.7 (0.3 pt)

$\theta_2 =$

B.8 (1.0 pt)

$p_X =$

$n_{AAO} =$

B.9 (0.6 pt)

$p_1 =$

$p_2 =$

Part C. Sample Y. Several transmittance minimums

C.1 (0.6 pt)

$\lambda_1^{sp} =$

$\lambda_2^{sp} =$

$\lambda_3^{sp} =$

C.2 (0.5 pt)

θ	I_{red}				

C.3 (0.5 pt)

θ	I_{green}				

C.4 (0.5 pt)

θ	I_{blue}				

C.5 (0.6 pt)
Fill in the first column with the discovered normal wavelengths λ_Y.

λ_Y	m	t

C.6 (1.0 pt)
Fill in the second column in C.5 table with the corresponding values m.

C.7 $(0.2\ \mathrm{pt})$

$D_Y =$

C.8 $(0.6\ \mathrm{pt})$
Fill in the third column in C.5 table with the corresponding values t.

Part D. Sample Z. Missed transmittance minimums

D.1
Describe your method with sketches and equations.

D.1 $(1.2\ \mathrm{pt})$
Write down the normal wavelengths λ_Z^n and corresponding integers m. You can provide two variants of latter. Only the best one will be assessed.

λ_Z	m, variant 1	m, variant 2

D.2 $(2.0\ \mathrm{pt})$
Fill integers m in the table of D.1 box in accordance with wavelengths λ_Z. You can provide two sets of numbers. Only the best one will be assessed.

D.3 $(0.3\ \mathrm{pt})$

$D_Z =$

D.4 $(1.0\ \mathrm{pt})$
Write down the wavelengths λ'_Z of missed transmittance minimums and corresponding integers m. You can provide two variants in accordance with answers in D.1-2. Only the best one will be assessed.

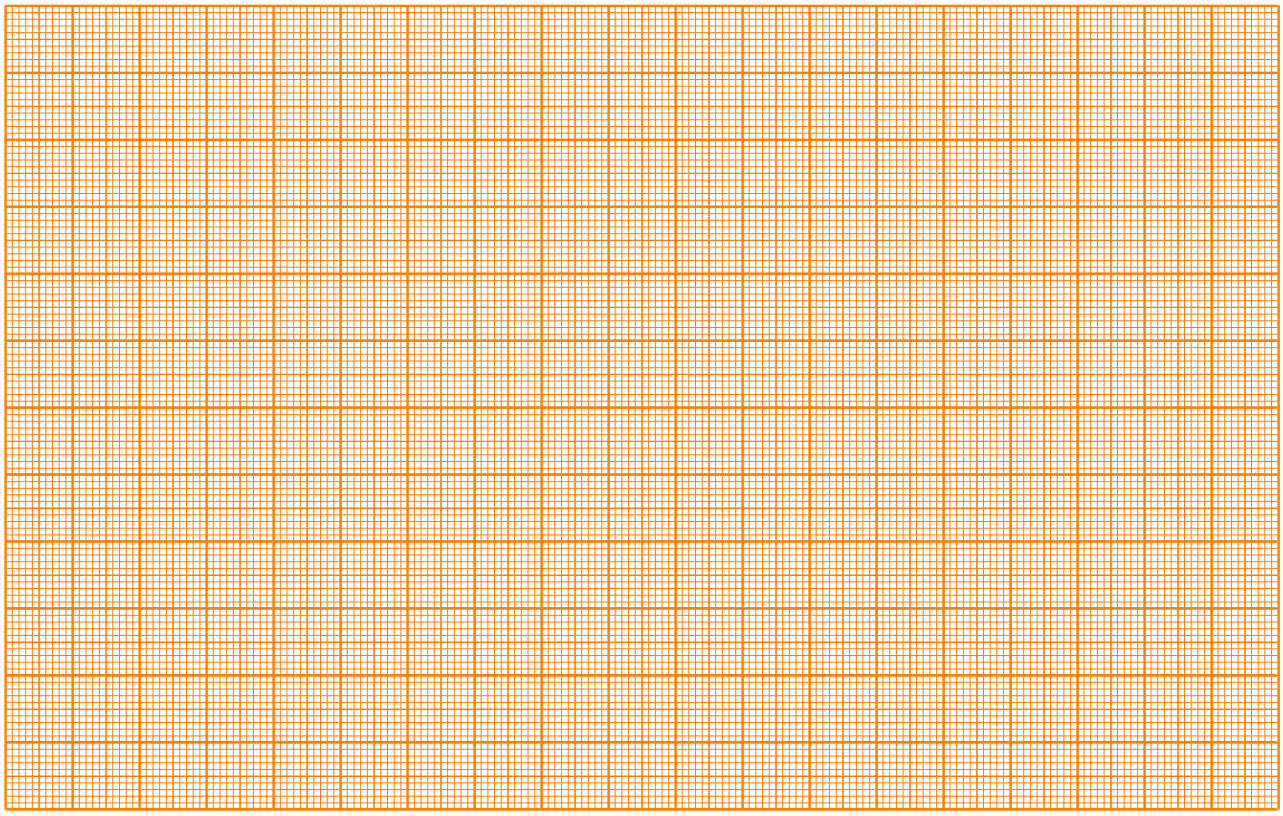
λ'_Z, variant 1	m', variant 1	λ'_Z, variant 2	m', variant 2

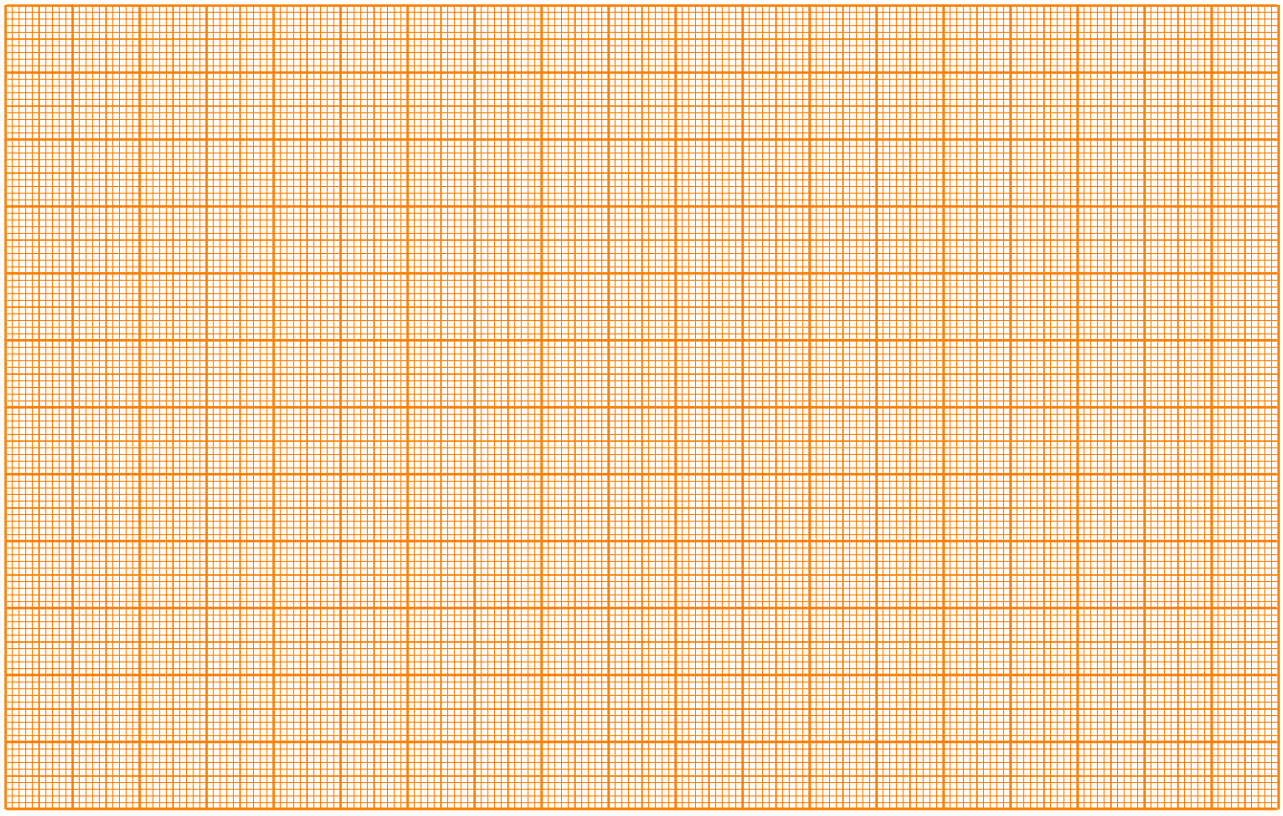
Part E. Samples Y and Z. Internal structure of the period

E.1 (1.2 pt)
Name of the sample Y

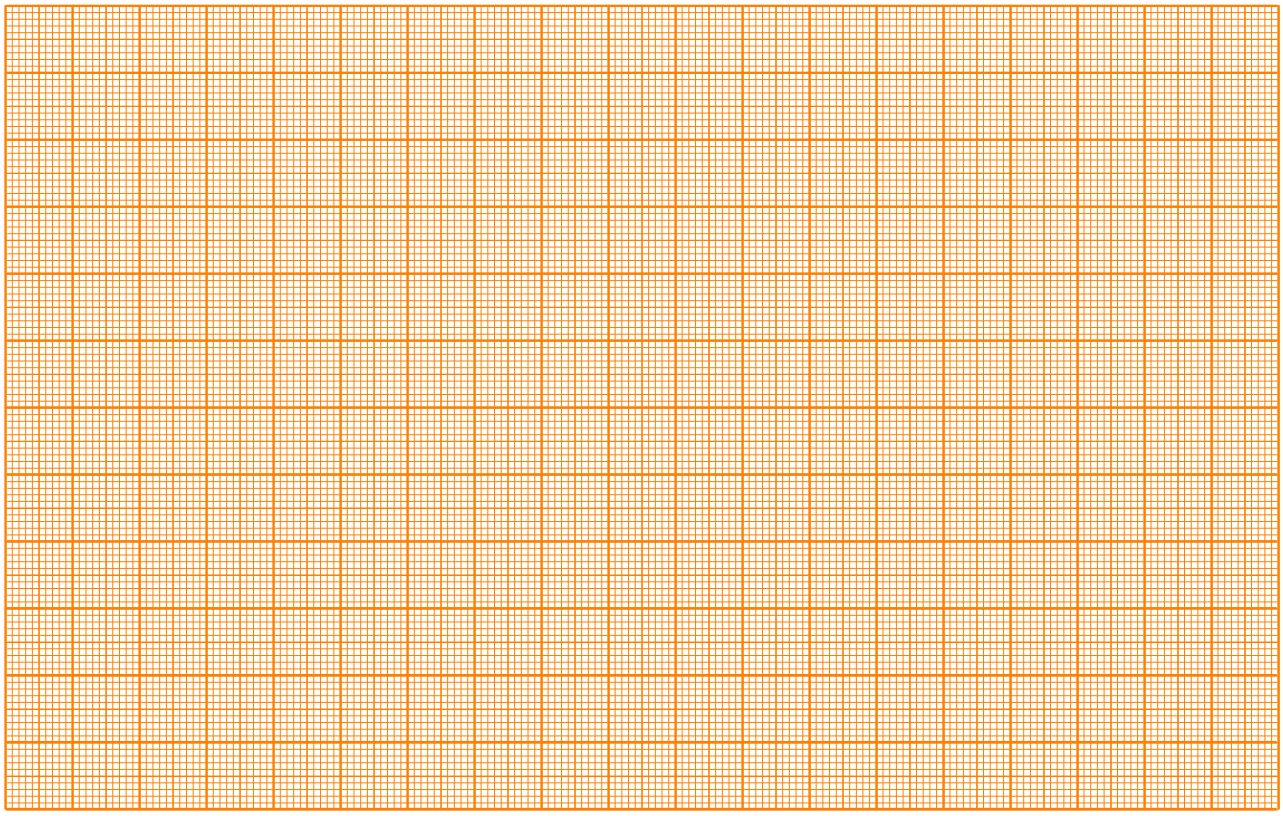
E.2 (1.3 pt)
Name of the sample Z

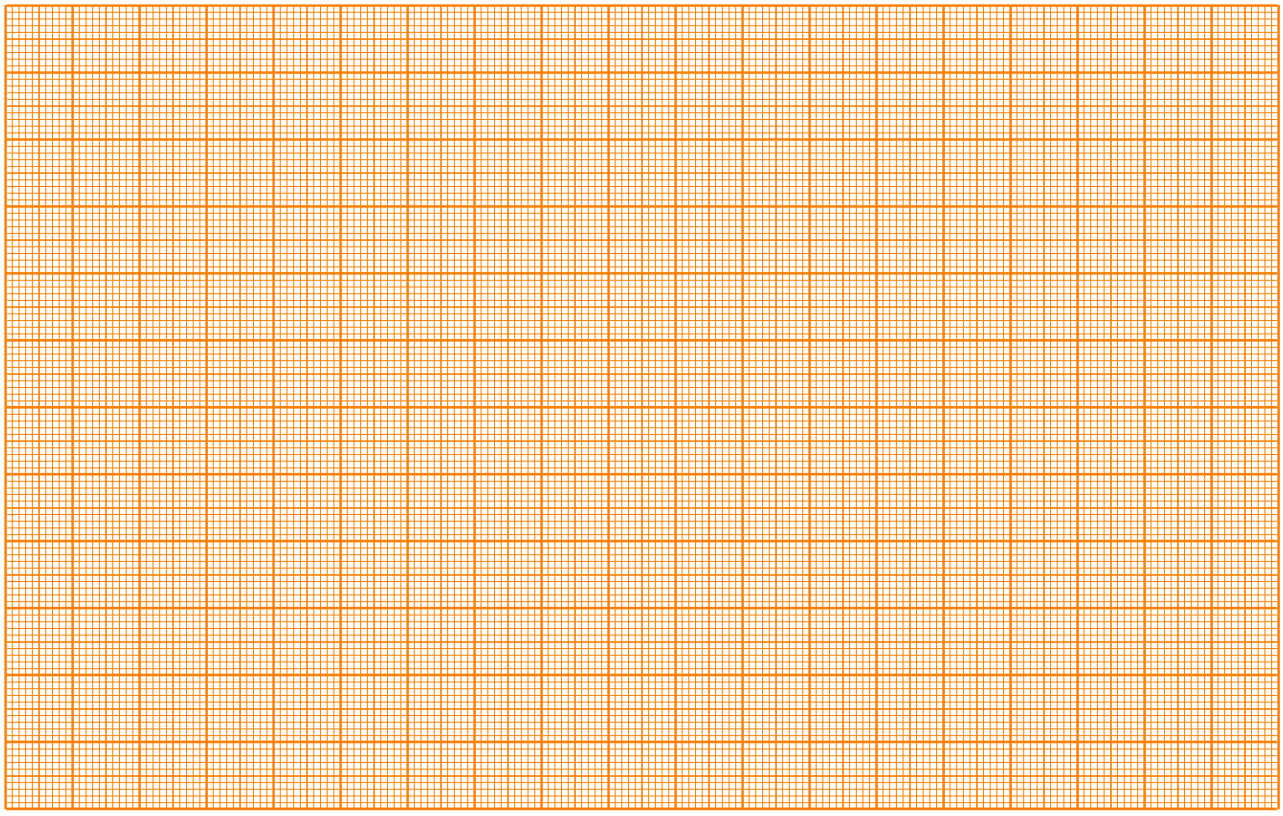
Additional graph paper



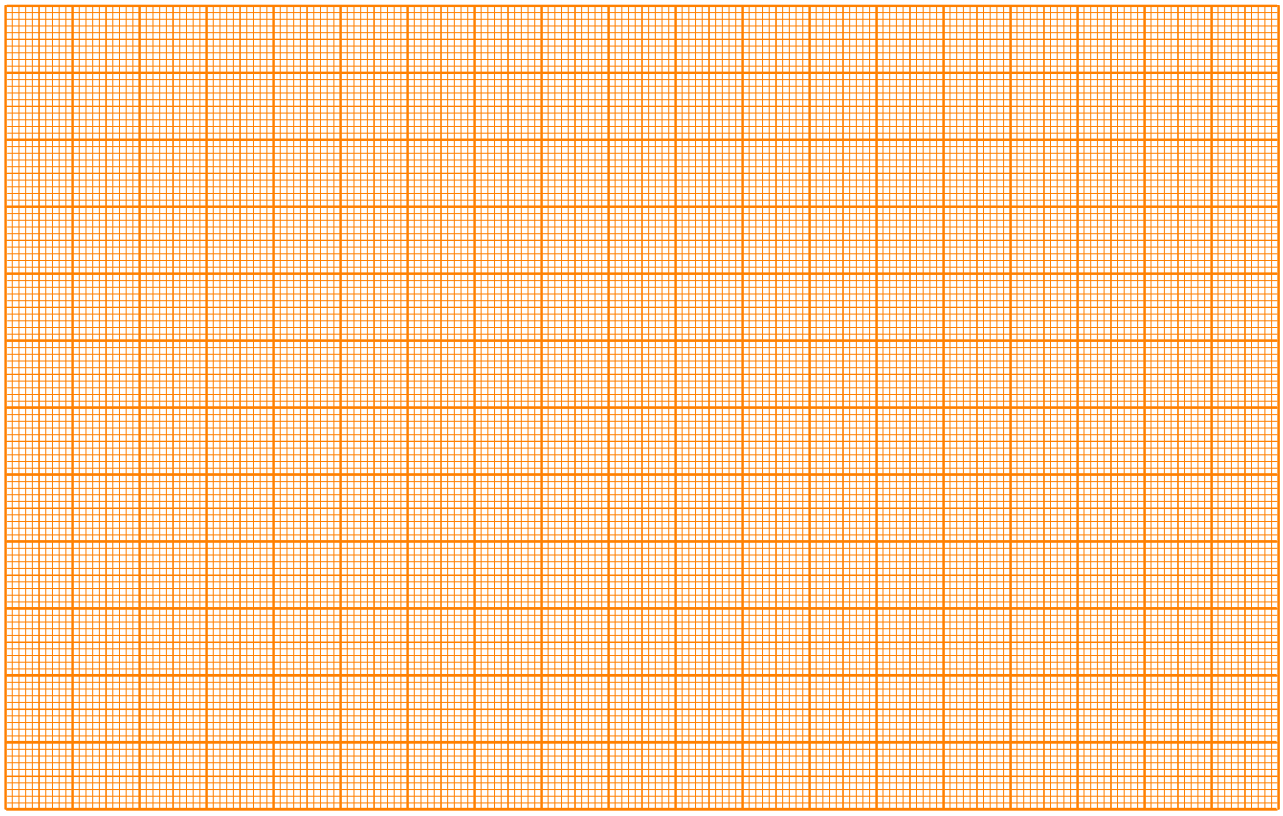


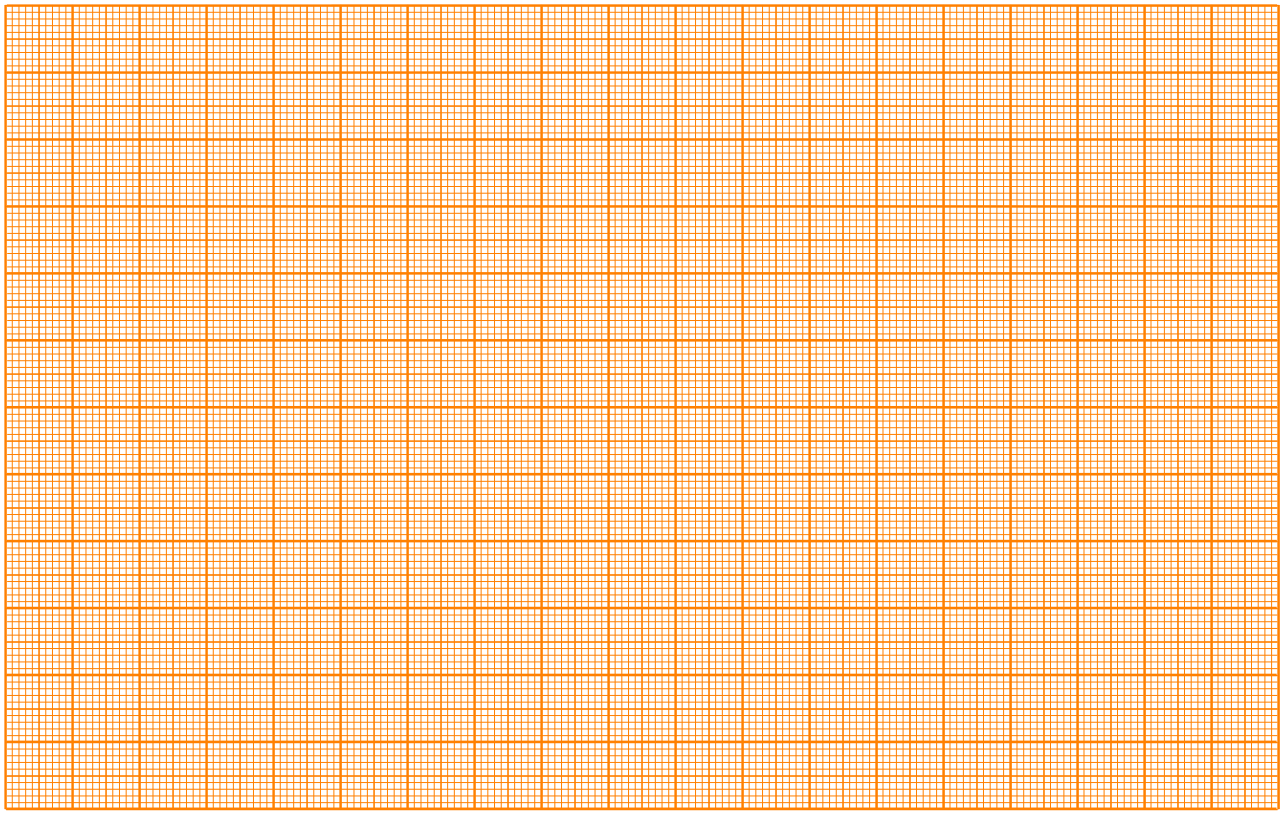
Additional graph paper



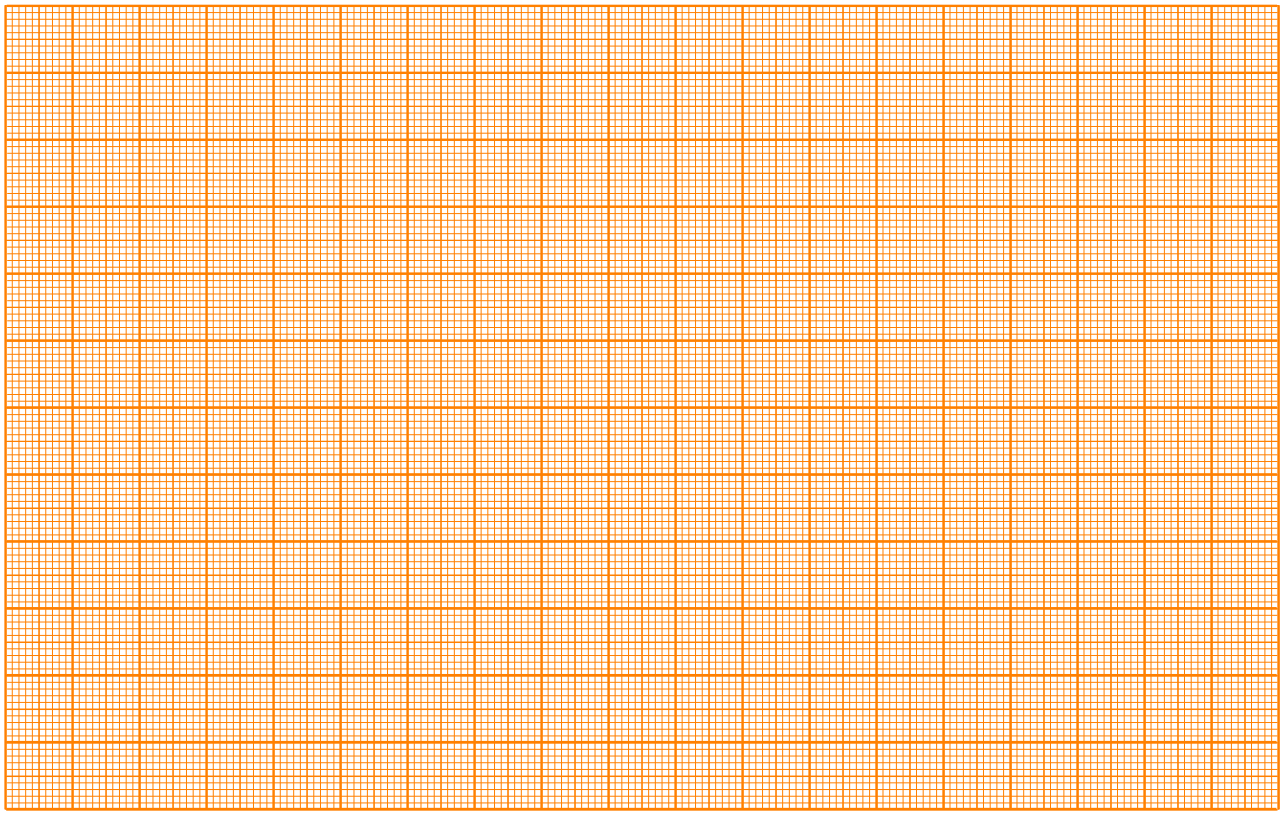


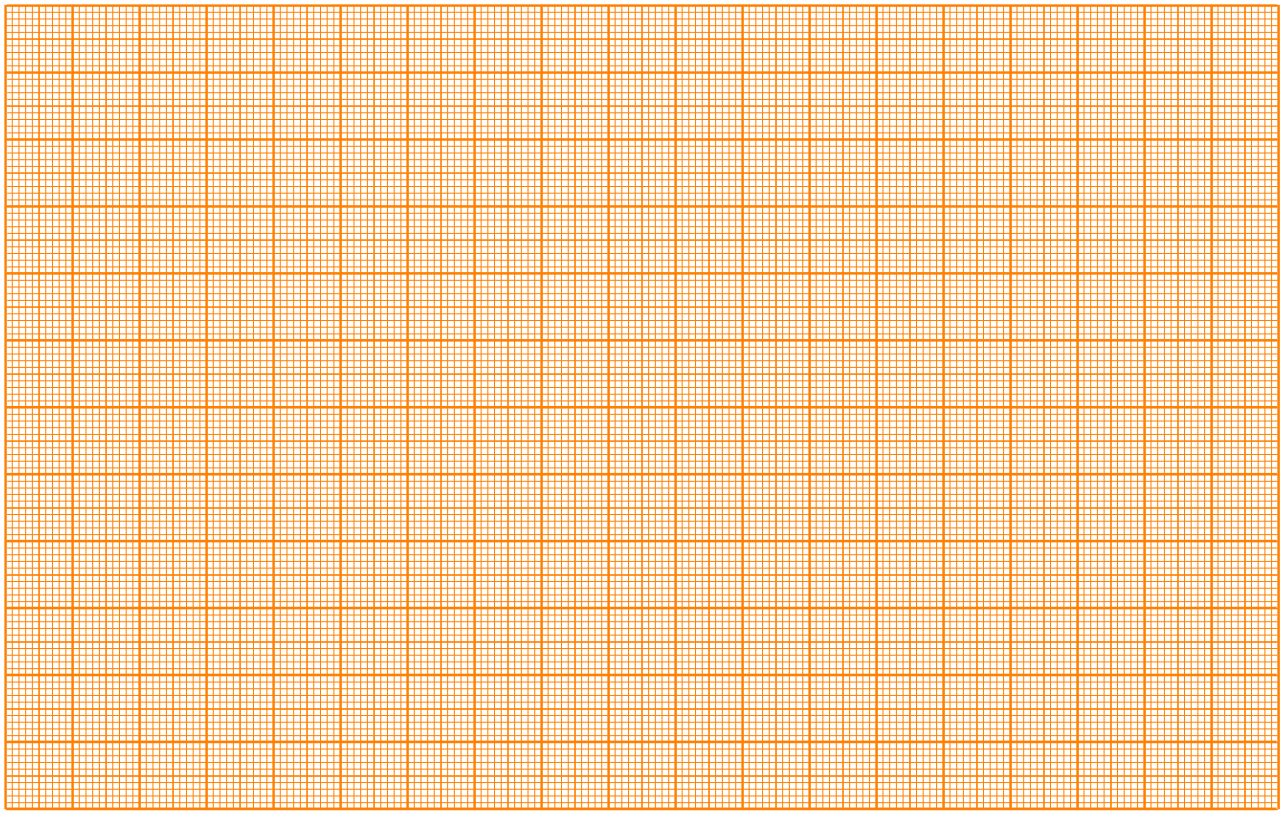
Additional graph paper





Additional graph paper





Additional graph paper