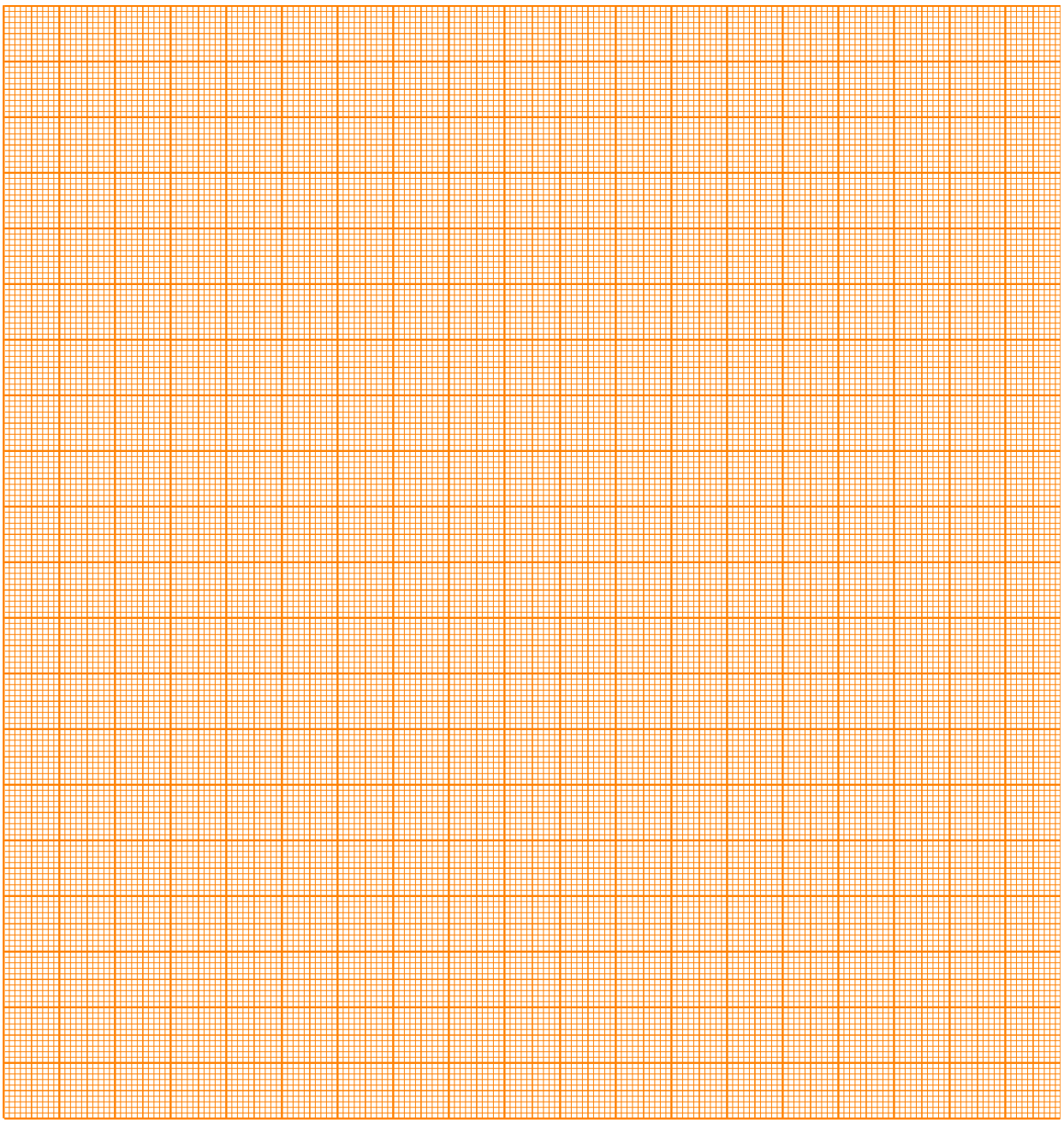
Jumping Beads (10 points)

Part A. Critical excitation amplitude (3.3 points)

A.1 (1.2 pt)

A_D	N_1	N_2			

A.2 (1.1 pt)
Graph A.2: N_1, N_2 vs. A_D



A.3 (1.0 pt)

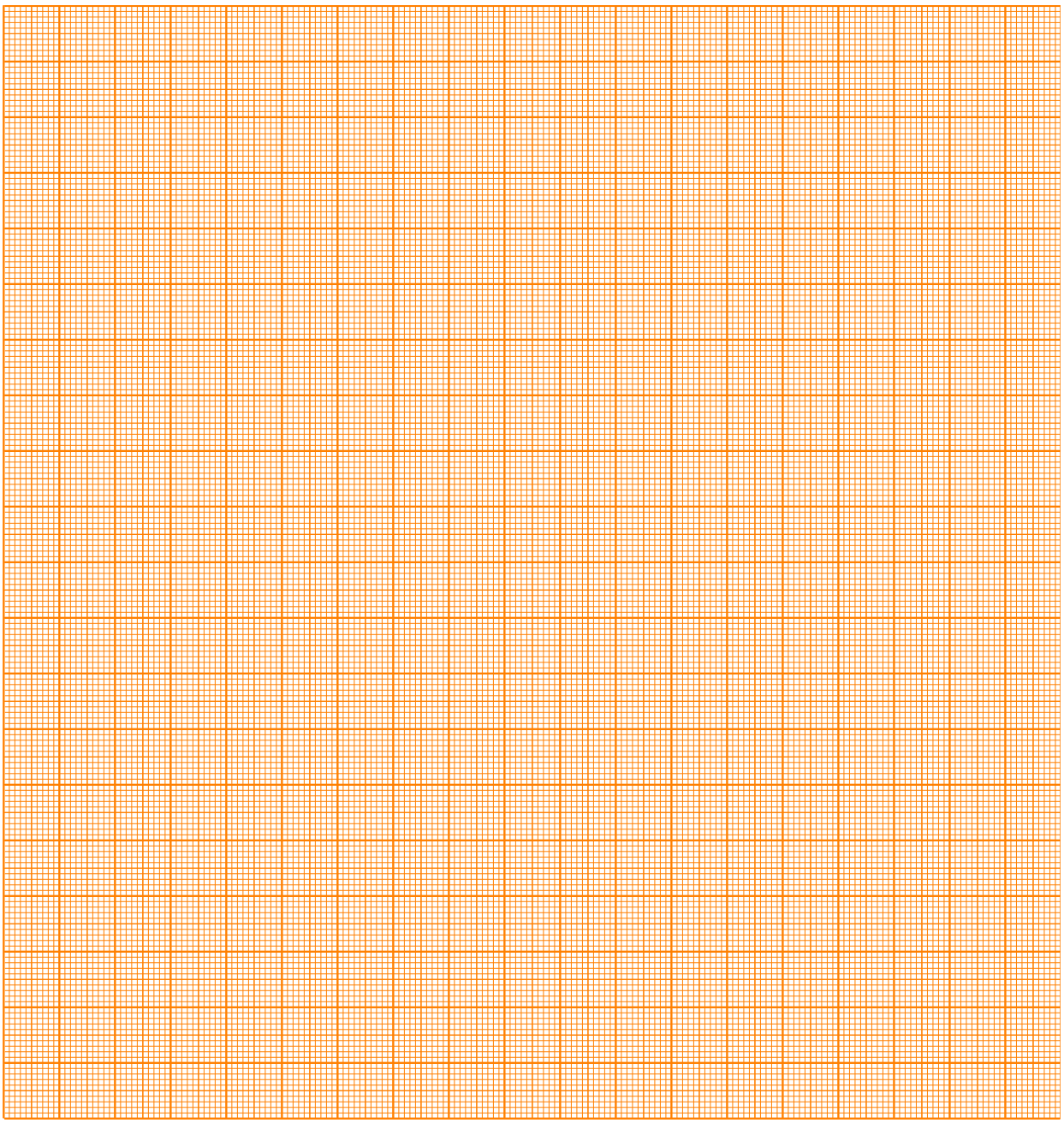
$A_{D,\,\mathrm{crit.}} =$

Part B. Calibration (3.2 points)

B.1 (0.5 pt)
Sketch of the setup:

B.2 (0.8 pt)

B.3 (1.0 pt)
Graph B.3: A vs. A_D



B.4 (0.8 pt)
Function $A(A_D)$:

Parameters of the curve:

B.5 (0.1 pt)

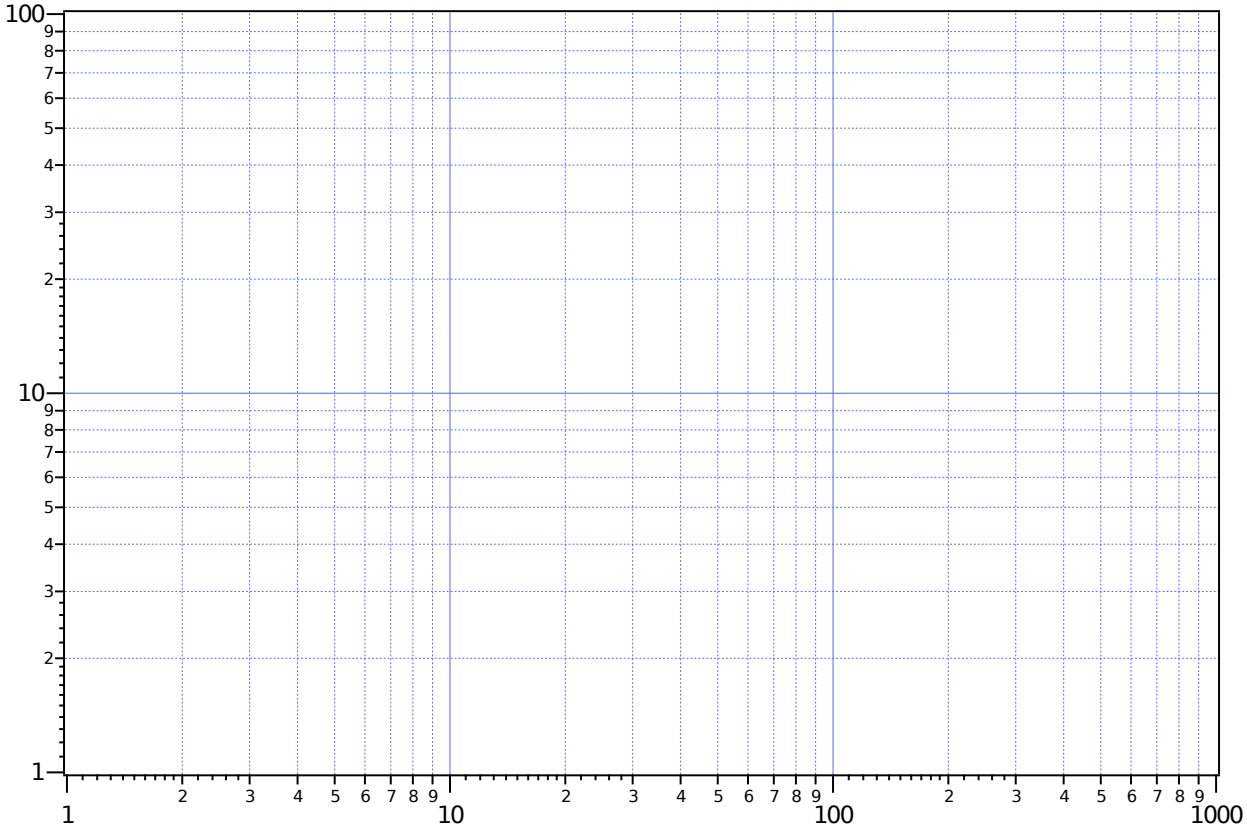
$A_{\text{crit.}} =$

Part C. Critical exponent (3.5 points)

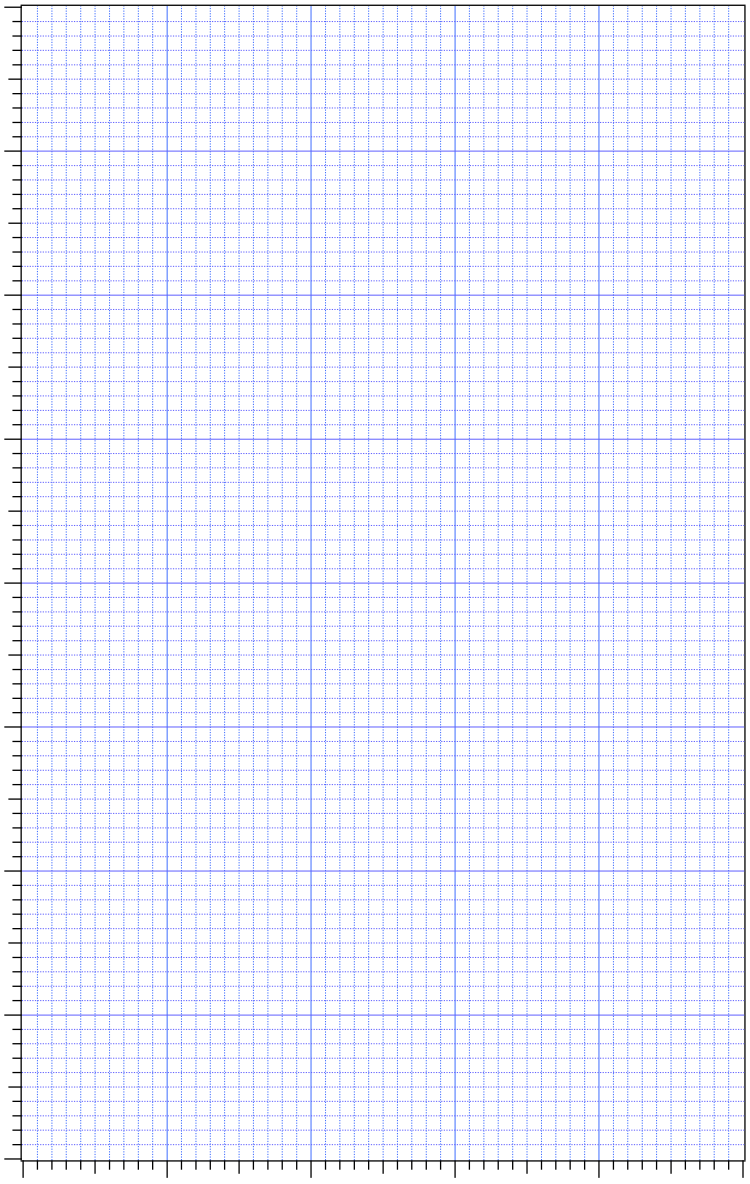
C.1 (1.1 pt)

C.2 (1.0 pt)
Plot $\frac{N_1-N_2}{N_1+N_2}$ vs. $\left|A^2-A_c^2\right|$ in either **Graph C.2a** or **Graph C.2b**.

Graph C.2a double logarithmic paper



Graph C.2b linear paper



C.3 (1.4 pt)

$b =$

$\Delta b =$