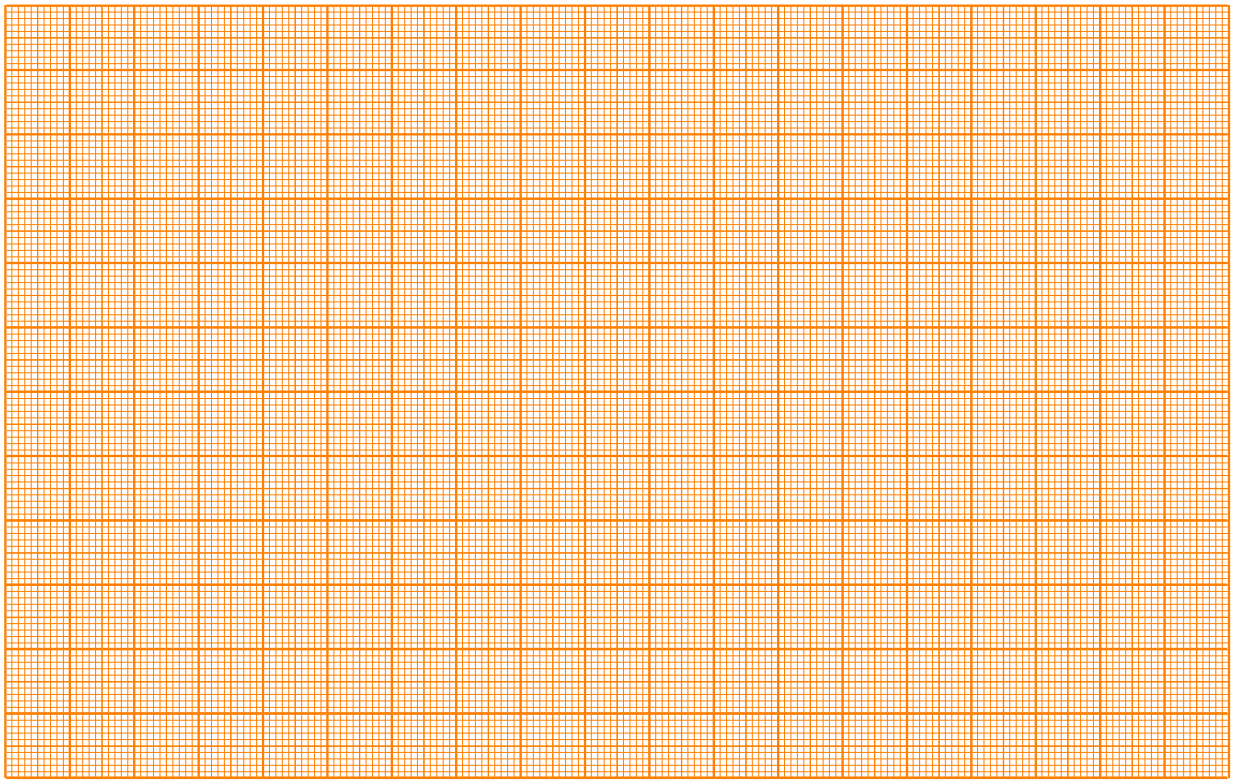
Cylindrical Diode

Part A: Finding Exponents (4.5 pts)

A.1 (1.5 pt)

Table of Data

A.1 (cont.)

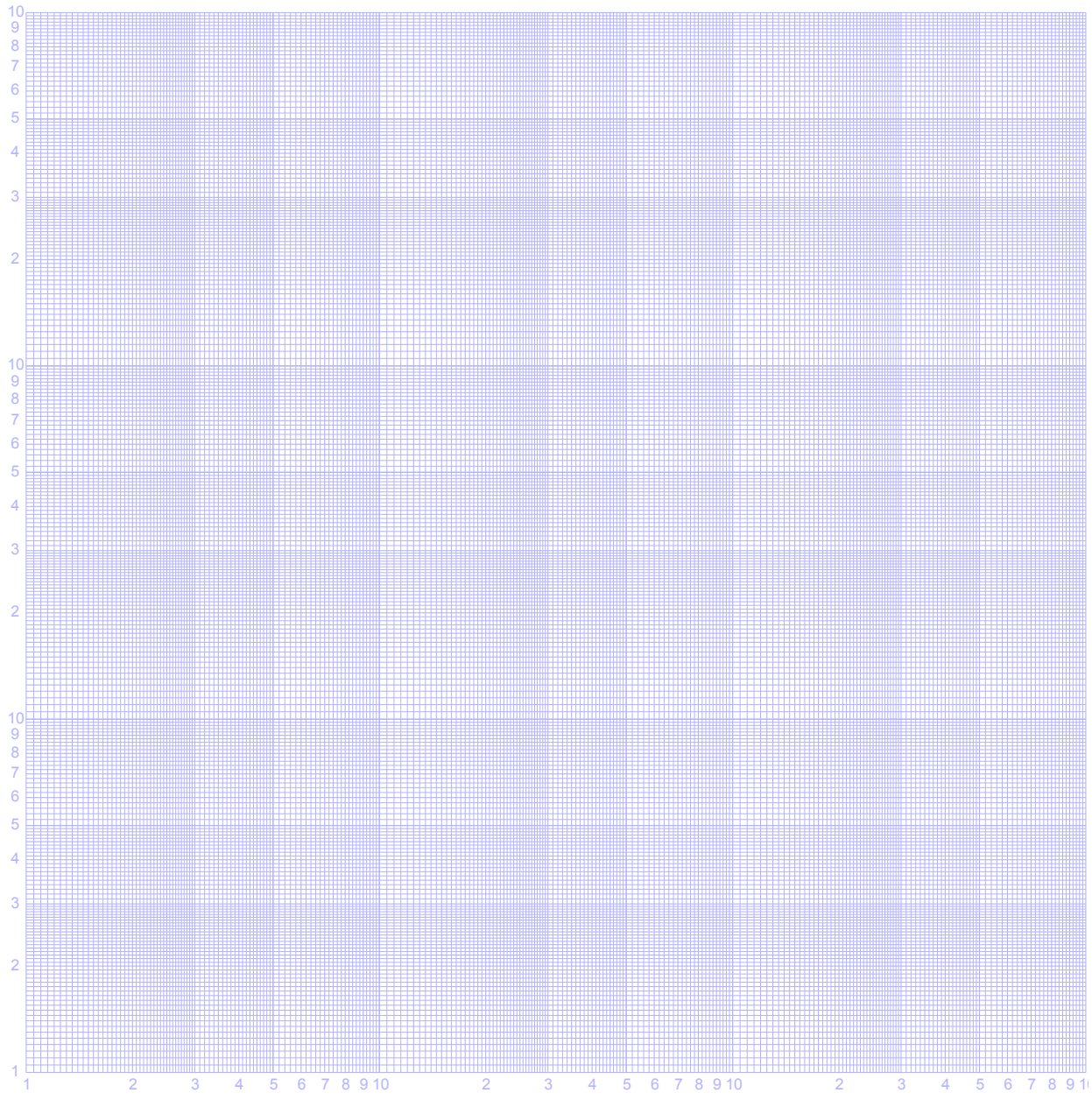


$\gamma =$

$\delta\gamma =$

A.1 (cont.)

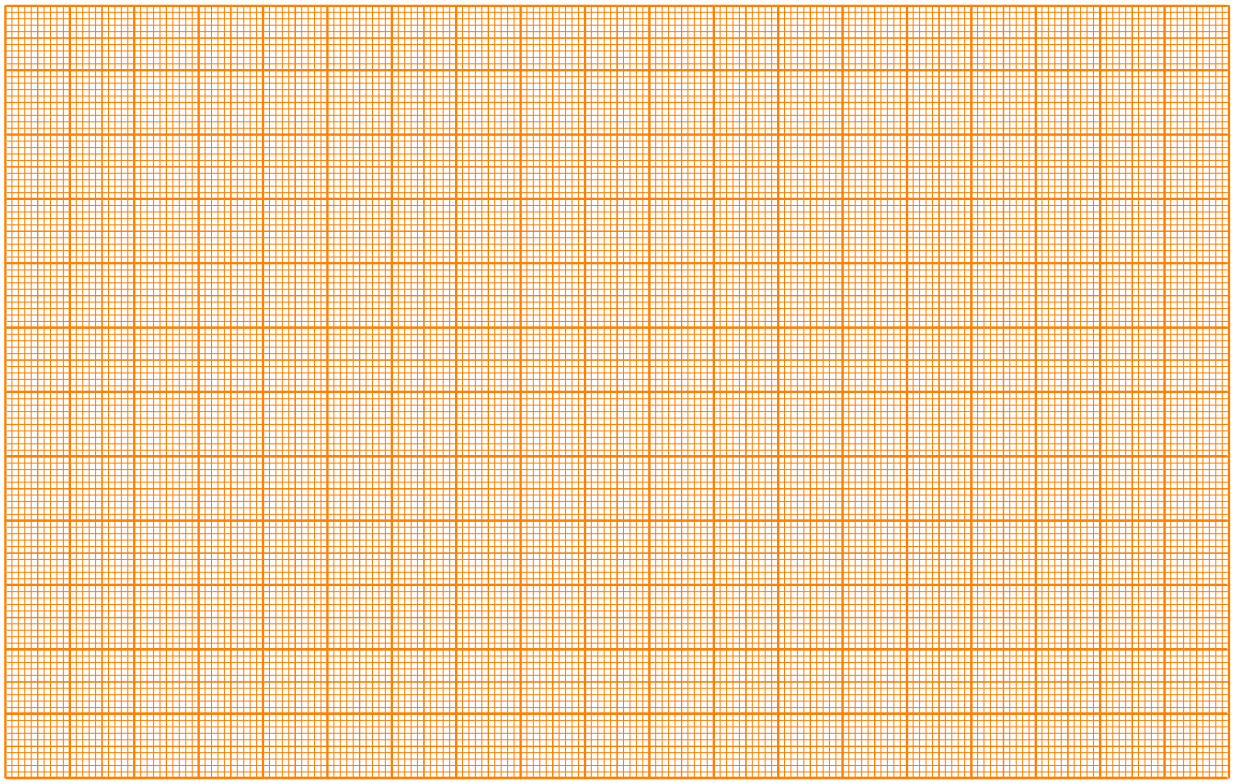
The log-log plot is optional; you only need to draw a single graph for this part.



A.2 (1.5 pt)

Table of Data

A.2 (cont.)

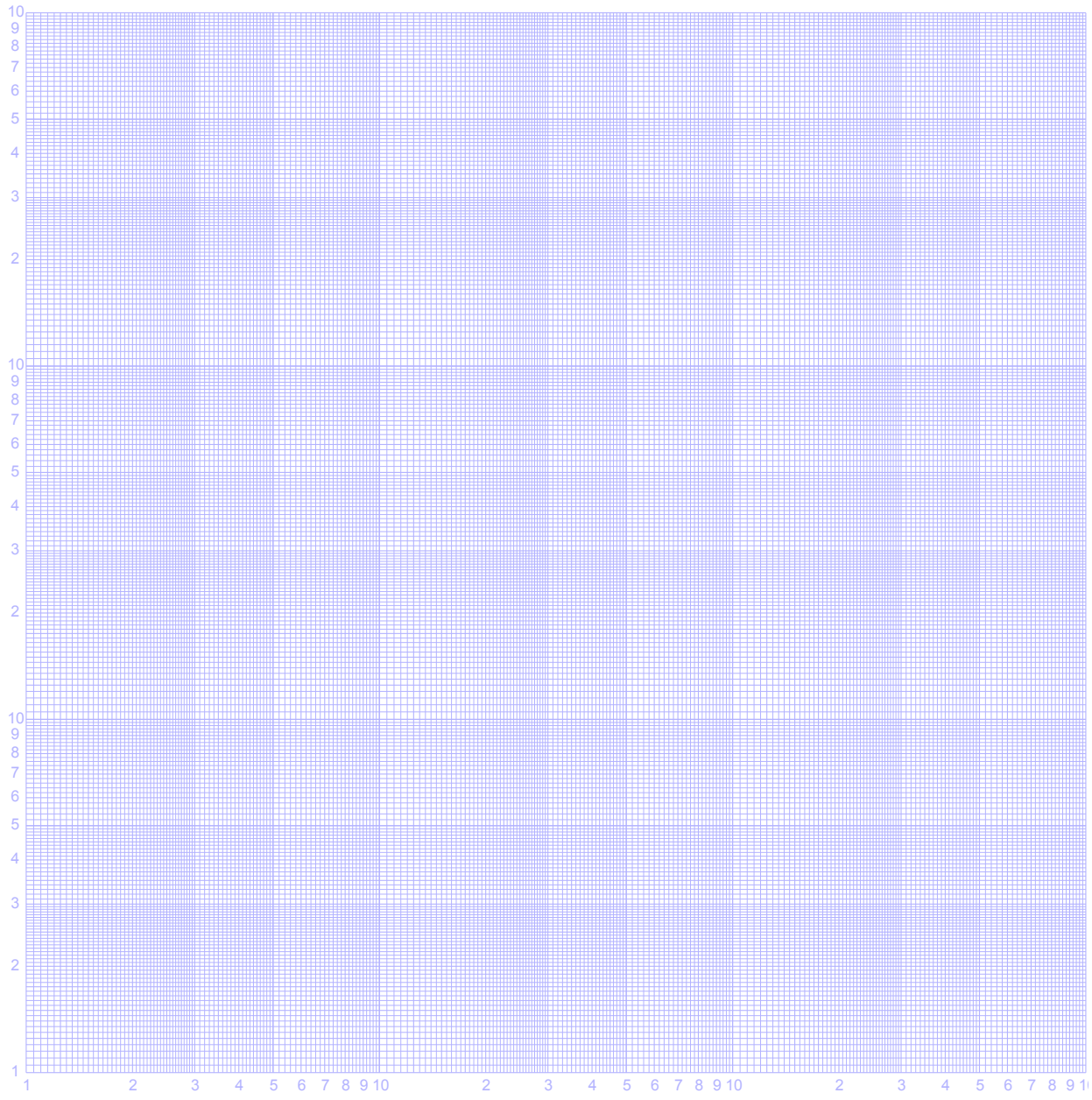


$\beta =$

$\delta\beta =$

A.2 (cont.)

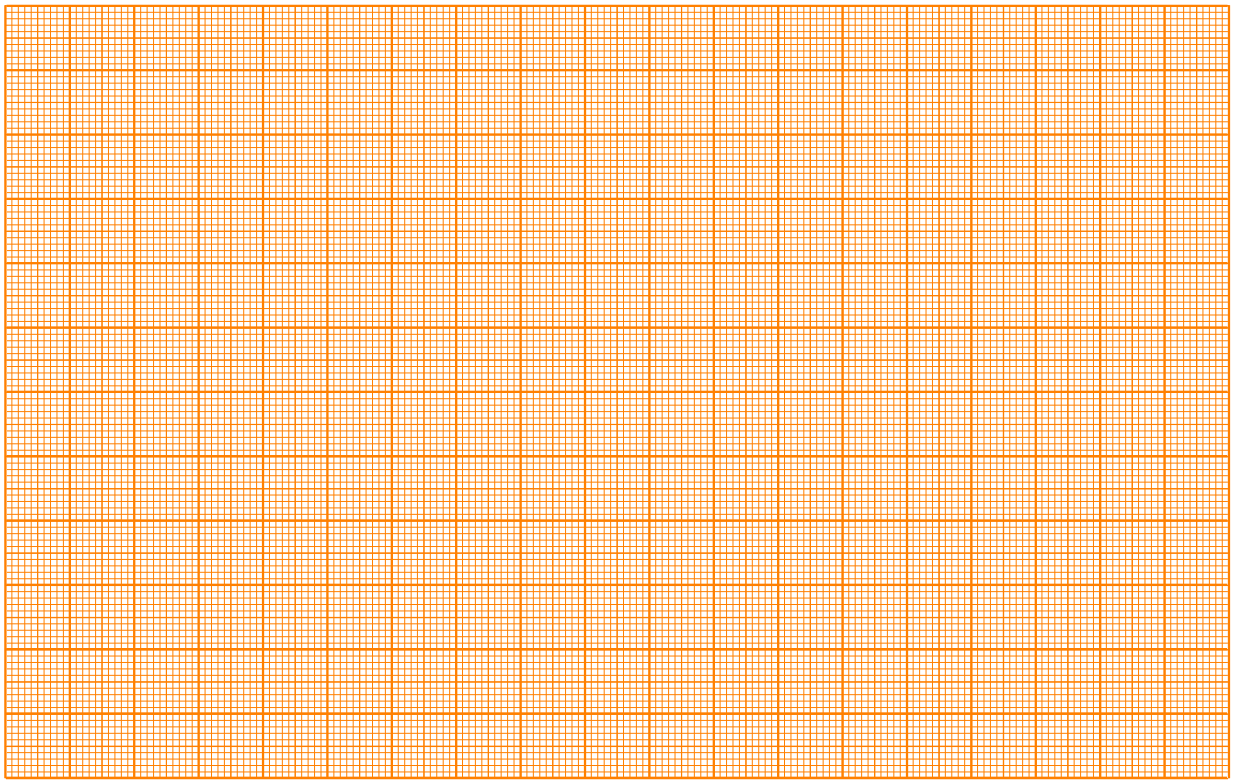
The log-log plot is optional; you only need to draw a single graph for this part.



A.3 (1.5 pt)

Table of Data

A.3 (cont.)

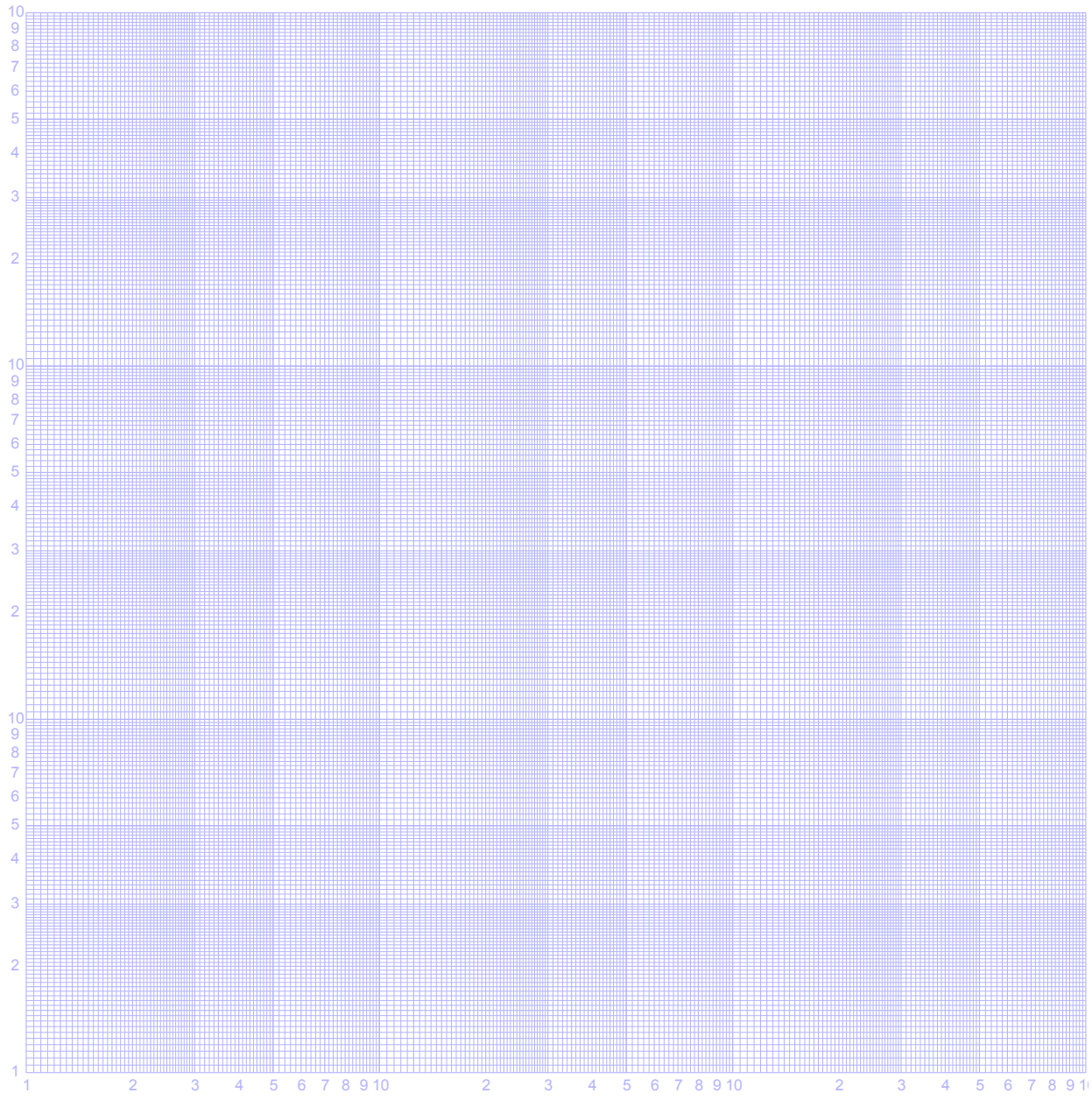


$\alpha =$

$\delta\alpha =$

A.3 (cont.)

The log-log plot is optional; you only need to draw a single graph for this part.



Part B: Finding the Coefficient G (1.0 pts)

B.1 (1.0 pt)

$G(10) =$

$\delta G(10) =$

Part C: Finding dimensionless function F (2.5 pts)

C.1 $(0.5\ \mathrm{pt})$

In each case below, use one of the symbols to identify change: $\uparrow$ increase; $\downarrow$ decrease; $\leftrightarrow$ no change

When R_c increases, F will:

When R_e increases, F will:

When L_e increases, F will:

When V increases, F will:

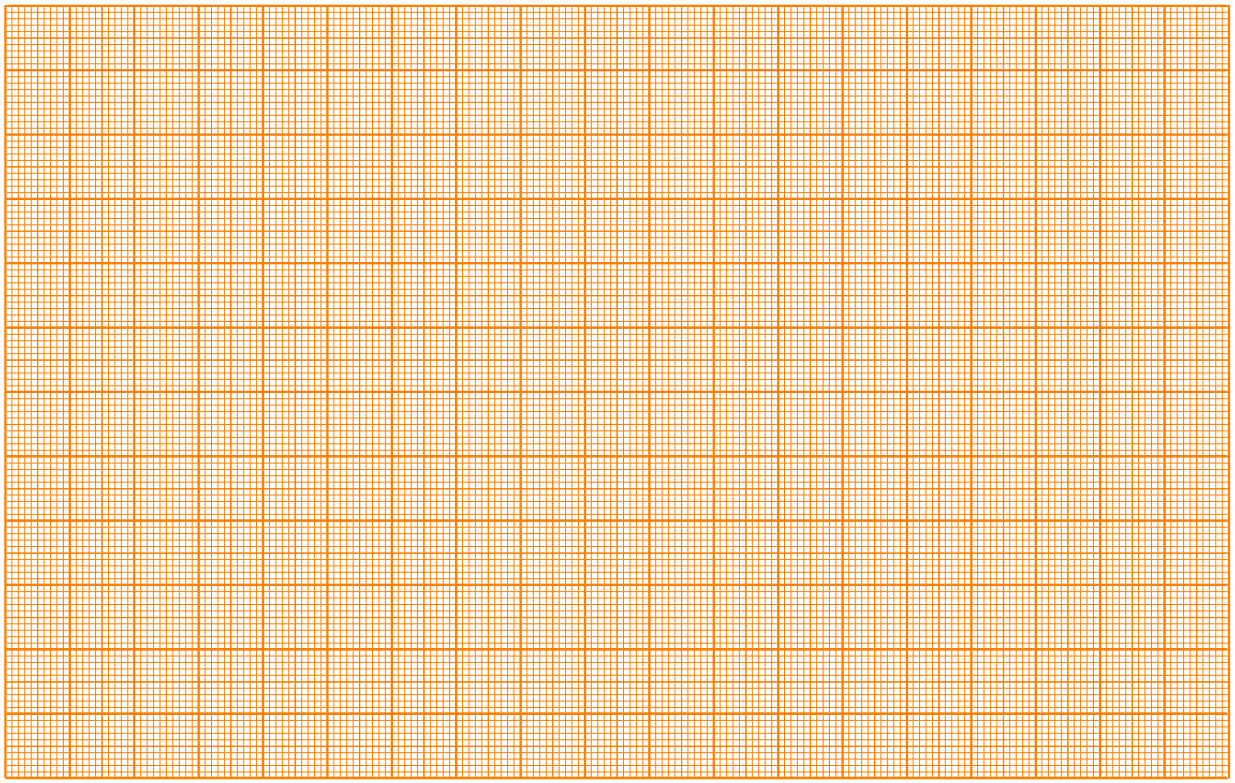
C.2 $(0.5\ \mathrm{pt})$
Suggested functions for x in $F(x)$ are below in the table; select the one that is the best.

$R_C L_E$	$R_C V$	$R_C R_E$	$L_E V$
R_C/R_E	R_C/V	R_C/L_E	L_E/V

C.3 (1.5 pt)

Data Table (if necessary):

C.3 (cont.)



Slope of line for $F(x) = A + Bx$: