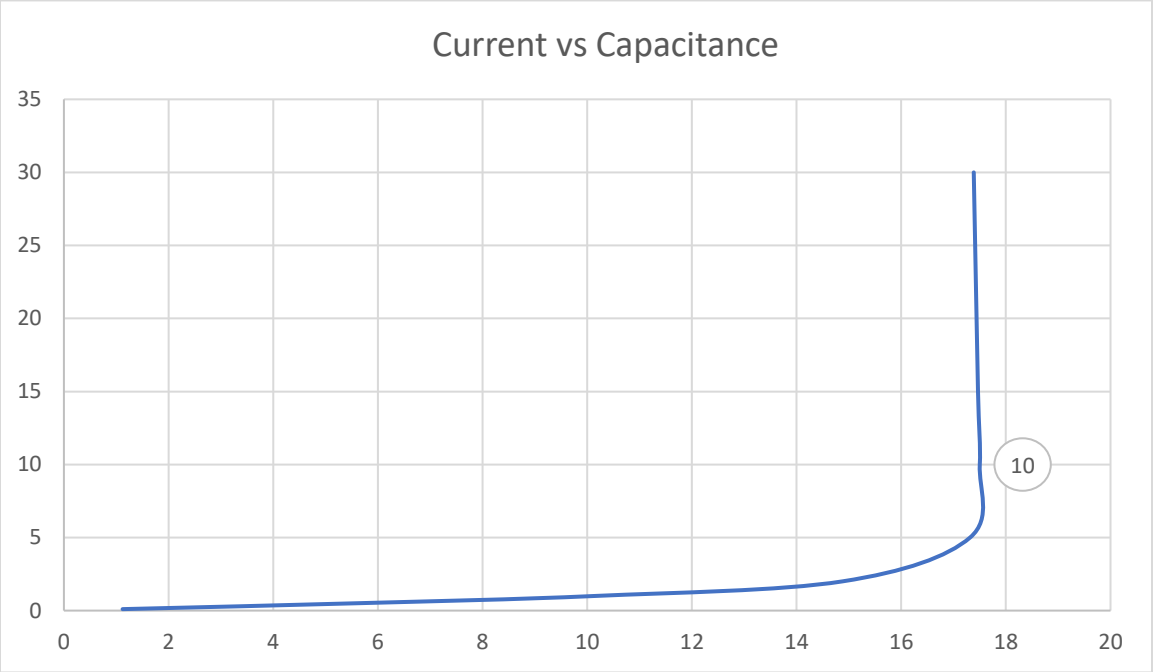
Problem 1:

Capacitance (µF)	Current, I (mA)
0.1	01.121 A
0.5	05.564 A
1.0	10.138 A
2.0	14.878 A
5.0	17.316 A
10.0	17.502 A
15.0	17.468 A
30.0	17.387 A



Problem 2:

70.7% of the peak current 17.502 mA:

17.502×0.707=12.384mA

So, the cutoff current is approximately 12.384 mA.

At 1.0 µF, the current is 10.138 mA (below the cutoff).

At 2.0 µF, the current is 14.878 mA (above the cutoff).

BW: Interpolating between **1.0 µF** (10.138 mA) and **2.0 µF** (14.878 mA), the cutoff capacitance is approximately **1.474 µF**.

Problem 3:

Capacitance (μF)	Current (A)	Power (W)
0.1	0.01121	0.01257
0.5	0.05564	0.3096
1.0	0.10138	1.0279
2.0	0.14878	2.2135
5.0	0.17316	3.0002
10.0	0.17502	3.0632
15.0	0.17468	3.0493