

Problem 1

The question requires optimizing $\frac{1}{2} w^T w$ subject to $y_n(w^T x_n + b) \geq 1$

Which means that we are looking to optimize $|w| + |b|$ many variables and $|w| = d$ and $|b| = 1$ so the answer is $d + 1$ variables which is **D**

Problem 2

The sim returns 0 vs. all as the max E_{in} so the answer is **A**

Problem 3

The sim returns 1 vs. all as the max E_{out} so the answer is **A**

Problem 4

The sim returns a difference in number of SVs of 1793 so the answer is **C**

Problem 5

We know intuitively that the highest C will allow for the best fitting which means lowest E_{in} and the results of the sim confirm while debunked the others. Thus, the answer is **D**

Problem 6

The sim confirms the statement of **B** to be true

Problem 7

The sim returns that $C = 0.001$ is selected most often so the answer is **B**

Problem 8

The sim returned average best $E_{\text{CV}} \approx 0.0044$ so the answer is **C**

Problem 9

The sim returned lowest E_{in} for $C = 1 \times 10^6$ so the answer is **E**

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Set 8

Problem 10

The sim returned lowest E_{out} for $C = 100$ so the answer is **C**