

Supplementary Problems for Section 2.2

1. Show that $f : x \mapsto |x|$ is continuous on \mathbb{R} .
2. Show that $\forall a, b \in \mathbb{R}$

$$\max\{a, b\} = \frac{a + b + |a - b|}{2}, \quad \min\{a, b\} = \frac{a + b - |a - b|}{2}.$$

3. (a) Use the results of the two previous problems to give a short solution to Problem 12 in Section 2.2.
- (b) Solve Problem 12 in Section 2.2 directly by using the ε - δ -technique.