Problem 1 (5 points): Show that any function which is monotone on the interval $[a, b]$ is Riemann integrable on $[a, b]$.

Problem 2 ( 7 points): Please do problem 3.5.13 in 'Introduction to real analysis'.

Problem 3 (2 points): Please do problem 3.5.17 in 'Introduction to real analysis'.

Problem 4 (8 points): Please do problem 3.5.24 in 'Introduction to real analysis'.

Problem 5 ( $\mathbf{3}$ points): Please do problem 3.5.26 in 'Introduction to real analysis'.

