Problem 1
Problem 1.4. Proof required. It is good to introduce some variables.

Problem 2
Problem 1.27.

Problem 3
Problem 1.31.

Problem 4
Problem 2.4 (a,b,c,f).

Problem 5
Problem 2.10 (a,b,d).

Problem 6
(a) Write the negation of the phrase “$f : A \rightarrow \mathbb{R}$ is bounded”, without using words “not”, “false”, “isn’t”, etc. (We say that $f$ is unbounded).
(b) prove that if $f : A \rightarrow \mathbb{R}$ is bounded, and $g : A \rightarrow \mathbb{R}$ is unbounded, then $f + g$ is unbounded.
(c) If $f : A \rightarrow \mathbb{R}$ is unbounded, and $g : A \rightarrow \mathbb{R}$ is unbounded, must it be true that $f + g$ is unbounded? Give a proof or counterexample.