Exercise 1. Prove that every odd integer has the form $4k \pm 1$ for some $k \in \mathbb{Z}$.

Exercise 2. Prove that there is a $y \in \mathbb{R}$ so that $\frac{x+2}{3x+4} = y$ has no real solutions.

Exercise 3. Textbook exercise 3.3.19.

Exercise 4. Textbook exercise 3.3.21.