Analysis Chapter 1
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1. Prove the $\sqrt{2}$ is not rational.

2. Prove that the product of two odd integers is also odd.

3. Let $A = \{a, b, c\}$. List the elements of $P(A)$.

4. Use the Archimedeam Property of $\mathbf{R}$ to prove that

$$\inf\{1/n : n \in \mathbf{N}\} = 0$$

5. Show that the set of all finite subsets of $\mathbf{N}$ is countable set.