PRACTICE – WHAT IS A GROUP?

1. Explain why the set of real numbers under subtraction does not form a group.

2. Explain why the set of real numbers under multiplication does not form a group.

3. Explain why the set of irrational numbers under multiplication does not form a group.

4. Prove: The identity element e in a group G is unique.

5. Prove: If G is a group and $a \in G$, then a has only one unique inverse.