Reading Quiz §2

Section 2 of Saracino's Abstract Algebra book gives the following definition:
Suppose that:

1. G is a set and $\star$ is a binary operation on G,
2. $\star$ is associative,
3. there is an element e in G such that $x \star e = e \star x = x$ for all x in G, and
4. for each element $x \in G$, there is an element $y \in G$ such that $x \star y = y \star x = e$.

1. [1] Provide an example set and binary operator that forms a group.

2. [1] Identify the identity e in the example group you provided above in problem 1.

3. [1] What property makes a group abelian?

4. [2] In the additive group of integers $\mathbb{Z}_{16}$ find:

   (a) 15+2

   (b) 15+18