Matrices mod p

Assignment 2

1. Consider \((\mathbb{Z}/7\mathbb{Z} - \{0\}, \times)\).
   (a) List all of the generators for this group.
   (b) Use each generator to explicitly construct the group.

2. Consider \((\mathbb{Z}/11\mathbb{Z} - \{0\}, \times)\).
   (a) List all of the generators for this group.
   (b) Use each generator to explicitly construct the group.

3. Consider \((\mathbb{Z}/13\mathbb{Z} - \{0\}, \times)\).
   (a) List all of the generators for this group.
   (b) Use each generator to explicitly construct the group.

4. Explicitly show that \((\mathbb{Z}/6\mathbb{Z} - \{0\}, \times)\) is not a group.