1 Project 3.2

In each of the following cases, explain what is meant by the statement and decide whether it is true or false:

1. For each $x \in \mathbb{Z}$, there exists $y \in \mathbb{Z}$ such that $x + y = 1$.
   The statement above is **true** because...

2. There exists $y \in \mathbb{Z}$, such that for each $x \in \mathbb{Z}$, $x + y = 1$.

3. For each $x \in \mathbb{Z}$, there exists $y \in \mathbb{Z}$ such that $x + y = 1$.

4. There exists $y \in \mathbb{Z}$ such that for each $x \in \mathbb{Z}$, $xy = x$.
   this is true