Do not forget needed parentheses: $a \mid (b - 17)$ is correct while $a \mid b - 17$ is not right correct.
When symbolically write, we can use math symbol for divides, e.g., $a \mid (b - 1)$.
Recall: $\mathbb{Z}^{\neq 0} = \mathbb{Z} \setminus \{0\}$. Similarly with $\mathbb{N}$ and $\mathbb{Q}$ and $\mathbb{R}$. This saves writing.

▶. **Conjecture 1**. For all integers a, b, and c such that $a \neq 0$, if a divides $b - 1$ and a divides $c - 1$, then a divides $bc - 1$.

1. Symbolically write Conjecture 1. As universe(s), use: $\mathbb{Z}$ and/or $\mathbb{Z}^{\neq 0}$ and/or some cross product of these.

2. State whether Conjecture 1 is true or false.

3. Justisfy your answer to the previous part. You should understand that this means the following. If Conjecture 1 is true, then provide a proof of Conjecture 1. If Conjecture 1 is false, then provide a counterexample and clearly explain why the conterexample is indeed a counterexample.

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