Before stating this homework, review the Symbolically Write Guidelines, which is also posted on the course homework page. It will answer many of the questions you might otherwise have.

▷. Conjecture B is from the previous ER 1.2.7 B.

►. **Conjecture B**. If b and c are odd integers and a is an integer, then $ab + ac$ is an even integer.

▷. ⟨The letter O is for Original statement while N is for the Negation of the original statement.⟩

O.1. Symbolically write Conjecture B using $\mathbb{Z}^3$ as the universe. ⟨recall $\mathbb{Z}^3 = \mathbb{Z} \times \mathbb{Z} \times \mathbb{Z}$⟩

O.2. Indicate whether Conjecture B is true or false (no justification needed, you already justified in ER 1.2.7 B).

N.1. Symbolically write a useful negation of Conjecture B using $\mathbb{Z}^3$ as the universe.

Your negation should not contain the symbols: $\sim$, $\neg$.

N.2. Using your answer to part O.2, determine whether the negation of Conjecture B is true or false.

Explain how you can arrive at your answer for N.2 from your answer to O.2.

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