

**Answer on Question #75986 – Math – Discrete Mathematics  
Question**

Write the sentence in logical notation, negate the sentence, and say whether the sentence or its negation is true.

*Given any integer, there is a larger integer*

**Solution**

Logical notation:

$$\forall x \in \mathbb{Z}, \exists y \in \mathbb{Z} \text{ such that } y > x$$

Negation:

*For some integers there is no a smaller integer.*

$$\exists x \in \mathbb{Z} \text{ such that } \forall y \in \mathbb{Z}, y < x$$

**Answer:** the sentence is true, its negation is false.