1. **Predicate Logic**: Show the predicate, including the domain, for the following English statements and say whether the predicate is true or false. If true give an example, else give a counterexample.

There exists a natural number greater than 3 and less than or equal to 7.

The cube of all integers is greater than 0.

One or more students in CS161 studied computer science in high school.

1. **Predicate Logic:** Write English statements for the following predicate logic and say whether the predicate is true or false. If true give an example, else give a counterexample.

**∃x ∈ Z+, where 29 < x2 < 42**

∀**x ∈ N, (x \* x \* x) > x + x + x**

**∃s ∈ { CS160 students }, P(s) and Q(s), where P is attending all labs and Q is completing all programming assignments.**