Math 301
Quiz 3

Justify all answers with neat and organized work. Clearly indicate your answers. 10 points possible.

1. (2 pts.) Write the contrapositive of this statement.

$\forall$ metric spaces X, if X is compact, then X is complete and X is totally bounded.

2. (2 pts.) Rewrite this statement in if-then form.

Doing the homework is a necessary condition for passing Math 301.

3. (2 pts.) Write the negation of this statement.

$\forall n \in \mathbf{Z}$, n is even.

4. (2 pts.) Write the negation of this statement.

$\forall$ integers n, if n is divisible by 2, then n is even.

5. (2 pts.) Write the negation of this statement.

$\forall$ thing x, there exists a season y such that y is the season for x.