27. State the converse, contrapositive, and inverse of each of
these conditional statements.
a) If it snows today, I will ski tomorrow.
b) I come to class whenever there is going to be a quiz.
c) A positive integer is a prime only if it has no divisors
other than 1 and itself.

Answer:

a) **Converse**: If I ski tomorrow, then it snows today.
   Contrapositive: If I don't ski tomorrow, then it is not snowing today.
   Inverse: If it does not snow today, I will not ski tomorrow.
b) **Converse**: Whenever there is going to be a quiz, I come to class.
   Contrapositive: If there is not going to be a quiz, I do not come to class.
   Inverse: I do not come to class whenever there is not going to be a quiz.
c) **Converse**: If a positive number has no divisors other than 1 and itself, then it is a prime.
   Contrapositive: If a positive number has divisors other than 1 and itself, then it is not a prime.
   Inverse: A positive integer is not a prime if it has divisors other than 1 and itself.