
For each of the following problems, circle T if the statement is always true and F if the statement is sometimes false. There is no partial credit on this part of the quiz.

1. T F “Yield to oncoming traffic” is a statement.
This is false. It is a command, not a declarative sentence.
2. T F “Shrek 2 was the top-grossing movie of 2004” is a statement.
This is true. It is a statement because it is a declarative sentence and we can check whether it is true or false.
3. T F “Each rational number is a positive number” is a true statement.
This is false. There are also negative rational numbers.
4. T F “Some natural numbers are not rational numbers” is a false statement.
This is true. All natural numbers are rational.
5. T F “Einstein was a physicist and π is irrational” is a true statement.
This is true. For an “and” statement to be true, both pieces need to be true, which they are here.

Complete the following problems. Find a (useful) negation of each of the following statements:

6. Some books are longer than this book.
“All books are not longer than this book” or “No books are longer than this book.”
7. No computer repairman can play poker.
This is the same as saying “All computer repairmen cannot play poker” so its negation is “Some computer repairmen can play poker.”
8. Shakespeare wrote sonnets and this poem exhibits iambic pentameter.
Shakespeare did not write sonnets or this poem does not exhibit iambic pentameter.