

Lesson 1 Presentation

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Problem 1.1.1

Mark each statement True or False. Justify each answer.

(a) In order to be classified as a statement, a sentence must be true.

Answer: False, it must be either true or false.

(b) Some statements are both true and false.

Answer: False, the statement must be one or the other, and not both.

(c) When statement p is true, its negation $\sim p$ is false.

Answer: True, by definition of negation.

(d) A statement and its negation may both be false.

Answer: False, by definition of negation, they must be opposites.

(e) In mathematical logic, the word “or” has an inclusive meaning.

Answer: True, the inclusive meaning allows two statements to be one or the other or both.