

Math 2283 - Introduction to Logic

Quiz #14 - 2016.02.17 Solutions

Consider the following sets:

$$A = \{x \mid x \text{ is a US state bordering the Atlantic Ocean.}\}$$

$$B = \{x \mid x \text{ is a US state bordering the Pacific Ocean.}\}$$

$$C = \{x \mid x \text{ is a US state which has a coast on the Gulf of Mexico.}\}$$

$$D = \{x \mid x \text{ is a US state which shares a border with Canada.}\}$$

$$E = \{\text{Texas, Oklahoma, Arkansas}\}$$

$$F = \{x \mid x \text{ is a US state which shares no border with any other US state.}\}$$

$$G = \{x \mid x \text{ is a US state whose has as part of its border the Red River of the South.}\}$$

Relate the following sets using the relations: subset, superset, overlap, disjoint, and equal.

1. A is disjoint from B

2. A overlaps with C

3. $F \subset B$

4. $E = G$

5. $B \supset F$