

Math 2283 - Introduction to Logic

Quiz #7 - 2017.02.17 Solutions

Define $P(x, y)$ to be “ x is the state capital of y ”. Here x is a city and y is a state of the Union. Convert the following logical sentence into a numerically quantified English sentence.

$$\forall y \exists x [P(x, y) \wedge (P(z, y) \rightarrow (x = z))]$$

The sentence could be stated: Each state of the Union has exactly one capital city.