

Quiz #4

Points: There are three problems on this quiz; each is worth 5 points.

1. Prove that there is a real number x such that $2^x > x^{10}$. Explain your answer using an English sentence.

2. Indicate whether the argument below is valid or invalid. (Note: A Simbaru is a car.)

Answer:

(write "valid" or write "invalid")

No good car is cheap.
A Simbaru is not cheap.
 \therefore A Simbaru is a good car.

Extra Credit: (5 points, no partial credit)

Write the negation of the statement below. Do not use a conditional statement within your answer.

$$\forall x \in \mathbb{R}, \text{ if } x > 3, \text{ then } x^2 > 9.$$

Answer: