

EECS20n, Quiz 1, 1/29/03

The quiz is to provide feedback to you and to me about how well you've followed the material so far. It is primarily testing your familiarity with the notation. The quiz will take 15 minutes. Write your response on the sheet.

Please print your name and lab time here:

Last Name _____ First _____ Lab time _____

Please indicate whether the following statements are **true** or **false**. There will be no partial credit, so please consider your answer carefully.

1. For any set X , $X \subset P(X)$, where $P(X)$ denotes the power set of X .

False

2. $\forall x \in \text{Reals} \exists z \in \text{Reals} \ x < z$.

True

3. $\exists y \in \text{Reals} \forall x \in \text{Reals} \ y < x$.

False

4. Consider a continuous-time function x where $\forall t \in \text{Reals}, x(t) = 2$. Then $x \in [\text{Reals} \rightarrow \text{Reals}]$.

True

5. Let $x: \text{Reals} \rightarrow \text{Reals}$ and $y: \text{Integers} \rightarrow \text{Reals}$ be functions such that $\forall n \in \text{Integers}, y(n) \leq x(n)$. Then $\text{graph}(y) \subset \text{graph}(x)$.

False

6. There is a function $f: \{1, 2\} \rightarrow \{a, b\}$ with $\text{graph}(f) = \{(1, a), (2, a)\}$.

True

7. Given two functions $f: X \rightarrow Y$ and $g: X \rightarrow Y'$, if $Y \subset Y'$ then $\text{graph}(f) \subset \text{graph}(g)$.

False