

Sections 1.6-1.8 Practice Problems

1. Let $P(x)$ be the statement “ $x=x^2$ ”. If the domain consists of integers, what are the truth values?

- a) $P(0)$
- b) $P(1)$
- c) $P(2)$
- d) $P(-1)$
- e) $\exists xP(x)$
- f) $\forall xP(x)$

2. Let $C(x)$: “ x is a comedian”, and $F(x)$: “ x is funny”, and the domain consists of all people. Translate the following quantifications into English:

- a) $\forall x (C(x) \rightarrow F(x))$
- b) $\exists x (C(x) \rightarrow F(x))$
- c) $\forall x (C(x) \wedge F(x))$
- d) $\exists x (C(x) \wedge F(x))$