

Introductory Logic: Worksheet 7

November 12, 2025

1 Problem 1

Provide a model where the following comes out invalid:

$$\exists x(Fx \rightarrow P) \vdash \exists x Fx \rightarrow P$$

2 Problem 2

Say which of these sentences are true in which of the diagrams below:

1. $\exists x \forall y(Rxy \rightarrow \exists z Ryz)$
2. $\forall x \exists y(Rxy \wedge \forall z(Ryz \rightarrow Rxz))$
3. $\exists x \exists y(Rxy \wedge \neg Ryx)$



