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Homework-3

10e) Everyone can be fooled by somebody

Ans: $F(x,y)$ is the statement "x can fool y"

$$\underline{\forall y \exists x F(x,y)}$$

This means that "for everyone there exists some person who can fool them"

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56) b) Some excuses are unsatisfactory

Ans $\exists x (R(x) \wedge \neg Q(x))$

c) Some excuses are not clear explanation

Ans $\exists x (R(x) \wedge \neg P(x))$

d) Does c follow from A and B

a) $\forall x (P(x) \rightarrow Q(x))$

$\Rightarrow \forall x (\neg Q(x) \rightarrow \neg P(x))$

b) $\exists x (R(x) \rightarrow \neg Q(x))$

From b and a $\exists x (R(x) \rightarrow \neg P(x))$

$\Rightarrow \exists x (R(x) \wedge \neg P(x))$