

p.241 A4)  $\forall x \exists y [R(x,y) \rightarrow (J(z) \wedge K(x))] \vee R(y,x)$

p.257 A9)  $\exists x B(x) \rightarrow \forall x A(x)$

true because  
 B is true at  
 b
 

 true b/c A  
 true for all  
 things in domain

$T \rightarrow T$

true

B7)  $\forall x H(x)$

false ~ H is not true for Lemmy or Eddy, so it is not true " $\forall x$ "

C7)  $\exists x \forall y (\neg R(x,y))$

"there is no arrow from x to y"

it is true ~ take  $x=3$  then there is no y such that there is an arrow from 3 to y