

1: $\text{var } i$	premiss
2: $\forall x.(P(x * x) \rightarrow P(x * j))$	premiss
3: $\neg P(i * j)$	premiss
4: $\forall x.P(x * x)$	assumption
5: $P(i * i)$	$\forall$ elim 4
6: $P(i * i) \rightarrow P(i * j)$	$\forall$ elim 2
7: $P(i * j)$	$\rightarrow$ elim 6,5
8: $\perp$	$\neg$ elim 3,7
9: $\neg \forall x.P(x * x)$	$\neg$ intro 4–8