1: $|P \lor \neg P, \forall x.P \rightarrow Q(x), \forall x.\neg P \rightarrow Q(x)|$ assumptions $P \rightarrow Q(m)$ 2: assumption $\neg P \rightarrow Q(m)$ 3: assumption 4: assumption Q(m)5: assumption Q(m)6: $\rightarrow \vdash 2,4,5-5$ $^{\mathsf{P}}$ 7: assumption Q(m) 8: 9: Q(m)∨⊢ 1.1,4-6,7-8 Q(m) 10: **∀**⊢ 1.3,3-9 11: Q(m) \forall \vdash 1.2,2-10 12: $\forall x.Q(x)$ **⊢∀11** Provided:

x NOTIN P