

CONSEQUENCE :

$$\frac{\models \varphi_1 \rightarrow \varphi'_1 \quad S, \mathcal{A} \vdash_C \varphi'_1 \Rightarrow^Q \varphi'_2 \quad \models \varphi'_2 \rightarrow \varphi_2}{S, \mathcal{A} \vdash_C \varphi_1 \Rightarrow^Q \varphi_2}$$

CASE ANALYSIS :

$$\frac{S, \mathcal{A} \vdash_C \varphi_1 \Rightarrow^Q \varphi \quad S, \mathcal{A} \vdash_C \varphi_2 \Rightarrow^Q \varphi}{S, \mathcal{A} \vdash_C \varphi_1 \vee \varphi_2 \Rightarrow^Q \varphi}$$

ABSTRACTION :

$$\frac{S, \mathcal{A} \vdash_C \varphi \Rightarrow^Q \varphi' \quad X \cap \text{FreeVars}(\varphi') = \emptyset}{S, \mathcal{A} \vdash_C \exists X \varphi \Rightarrow^Q \varphi'}$$

CIRCULARITY :

$$\frac{S, \mathcal{A} \vdash_{C \cup \{\varphi \Rightarrow^Q \varphi'\}} \varphi \Rightarrow^Q \varphi'}{S, \mathcal{A} \vdash_C \varphi \Rightarrow^Q \varphi'}$$