

(1) 设 $U = \{0, 1\}, \overline{P} = \{0\}, \overline{Q} = \{1\}, \overline{f(1)} = 0, \overline{f(2)} = 1, \overline{a} = 0,$

此时 $\overline{\forall x P(x)} = \overline{P(0)} \wedge \overline{P(1)} = F,$

故 $\overline{\forall x P(x) \rightarrow Q(f(a))} = T$

(2) 设 $U = \{0, 1\}, \overline{P} = \{(0, 0)\}, \overline{Q} = \{1\}, \overline{f(0)} = 0, \overline{f(1)} = 1, \overline{a} = 0$

此时 $\overline{\neg P(f(x), a)} = \neg \overline{P(f(0), 0)} = \neg \overline{P(0, 0)} = F,$

故 $\overline{\neg P(f(x), a) \rightarrow \forall x Q(x)}$