2

$$\neg \left[\exists_x \forall_y \left(\neg P(x,y) \wedge Q(x,y) \right) \right]$$

$$\equiv \forall_x \left[\neg \forall_y \left(\neg P(x,y) \wedge Q(x,y) \right) \right]$$

$$\equiv \forall_x \exists_y \ \neg \left(\neg P(x,y) \wedge Q(x,y) \right)$$

$$\equiv \forall_x \exists_y \left(P(x,y) \vee \neg Q(x,y) \right)$$