## 高中数学逻辑语句

f(x)是定义域为 $D_1\subseteq R$ 的实值函数,g(x)是定义域为 $D_2\subseteq R$ 的实值函数。  $\phi A = \{f(x) \mid x \in D_1\}$  , $B = \{g(x) \mid x \in D_2\}$  ·  $A \subseteq R$  , $B \subseteq R$ 

则有: Amin > Bmax

 $\langle = \rangle$   $\forall X_1 \in D_1$ ,  $f: f(X_1) > B_{max}$ 

<=> xt ∀ x<sub>1</sub>∈D<sub>1</sub>,  $\hat{q}$ : xt∀ x<sub>2</sub>∈D<sub>2</sub>,  $\hat{q}$ :  $\hat{f}$ (x<sub>1</sub>) >  $\hat{g}$ (x<sub>2</sub>)

 $\langle = \rangle \ \forall x_1 \in D_1, \ \forall x_2 \in D_2, \ f(x_1) \geqslant g(x_2)$ 

Amin > Bmin

<=> xf∀x,∈D,有:f(x,) > Bmin

<=> xf∀x, ∈D, 有: ∃xz∈Dz, 使得f(x,) ≥g(xz)

 $\langle = \rangle \forall x_1 \in D_1, \exists x_2 \in D_2, \text{ s.t. } f(x_1) \geqslant g(x_2)$ 

Amax > Bmax

⇒ ∃XIEDI,使得: f(XI) ≥ Bmax

<=>∃x,∈D,,使得:xt∀x2∈D2,有:f(x1)≥g(x2)

 $\langle = \rangle \exists x_1 \in D_1, \forall x_2 \in D_2, f(x_1) \geqslant g(x_2)$ 

 $A_{max} \gg B_{min}$ 

<>> ∃x1∈D1,使得:f(x1) ≥ Bmin

<=>∃x,∈D,,使得:∃x,∈D,,使得:f(x,)≥g(x,2)

 $(=) \exists x_1 \in D_1, \exists x_2 \in D_2, f(x_1) \ge g(x_2)$ 

ASB

<=> xt∀ λ∈A, 有: λ∈B

<=> x + ∀ x, ∈ D, 有: f(x,) ∈ B

 $\langle = \rangle$  xf∀xi∈Di,  $\hat{A}$ :  $\exists x_2 \in D_2$ , s.t.  $\hat{f}(x_1) = g(x_2)$ 

 $(=) \forall x_1 \in D_1, \exists x_2 \in D_2, f(x_1) = g(x_2)$ 

BSA

<=> xt ∀ λ ∈ B, 有: λ ∈ A

<=> x t ∀ x2 ∈ P2, 有: g(x2) ∈ A

(=) xt ∀ x<sub>2</sub> ∈ D<sub>2</sub>,  $\dot{q}$ :  $\exists$  x<sub>1</sub>∈D<sub>1</sub>, s.t.  $g(x_2) = f(x_1)$ 

 $\langle = \rangle \forall x_2 \in D_2, \exists x_1 \in D_1, s.t. g(x_2) = f(x_1)$ 

 $\langle = \rangle \forall x_2 \in \mathbb{D}_2$ ,  $\exists x_1 \in \mathbb{D}_1$ ,  $f(x_1) = g(x_2)$