Cardinal Numbers of Some Sets (VIII)*

Yang An-Zhou (杨安洲)

Let X be an infinite set, $C=\{B: B$ is a Boolean algebra defined on the $X\}$, Define $\hat{B}=\{D: D$ is isomorphie to $B\}$, $C_1=\{\hat{B}: B\in C$ & B is atomic$\}$, $C_2=\{\hat{B}: B\in C$ & B is not atomic$\}$, then $|C_1|=|C_2|=2^{|X|}$. The power set of X is denoted by $P(X)$, $P(X)$ is a field of sets (Under Union and Intersection of sets, and Complement of set), Suppose $K=\{F: F$ js a field of sets & $F\subseteq P(X)\}$, $K_1=\{\hat{F}: F\in K\}$, $K_2=\{\hat{F}: F\in K$ & F is not atomic$\}$ then $|K_1|=|K_2|=2^{2^{|X|}}$.

Cardinal Numbers of Some Sets (IX)*

Yang An-Zhou (杨安洲)

Let X be an infinite set, $C=\{G: G$ is a group defined on the $X\}$, Define $\hat{G}=\{H: H$ is isomorphic to $G\}$, $C_2=\{\hat{G}: G\in C$ & G js not commutative$\}$, then $|C_2|=2^{|X|}$. If $K=\{F: F$ is a division ring defined on the $X\}$, $K_1=\{\hat{F}: F\in K$ & F is not commutative$\}$, $K_2=\{\hat{F}: F\in K$ & F is commutative$\}$, then $|K_1|=|K_2|=2^{|X|}$. Suppose $T(X)=\{\varphi: \varphi\in X^X$ & φ is bijective$\}$, $S=\{G: G$ is a subgroup of $T(X)\}$, $S_1=\{\hat{G}: G\in S$ & G is commutative$\}$, $S_2=\{\hat{G}: G\in S$ & G is not commutative$\}$, then $|S_1|=|S_2|=2^{2^{|X|}}$.

Department of mathematics,
The Industrial University of Peking,
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