

P	Q	R	$P \text{ and } Q$	$\text{not}(P \text{ and } Q)$	$(P \text{ and } Q) \Rightarrow R$	$\text{not } P$	$Q \text{ or } R$	$P \Rightarrow (Q \text{ or } R)$
T	T	T	T	F	T	F	T	T
T	T	F	T	F	F	F	T	T
T	F	T	F	T	T	F	T	T
T	F	F	F	T	T	F	F	F
F	T	T	F	T	T	T	T	T
F	T	F	F	T	T	T	T	T
F	F	T	F	T	T	T	T	T
F	F	F	F	T	T	T	F	T

↑
answer

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Obviously we may also assume that $\epsilon > \delta$ which together with the previous assumption on ϵ implies that $\log(1/\epsilon) < \max\{c_1, \log(1/\delta)\}$. Therefore for δ small enough and n large enough (depending on δ) we get

$$\inf_{x \in \mathbb{R}^n} |x| \leq \sqrt{n} \epsilon \implies \|x\| \leq M\sqrt{n} \leq \delta \quad (5)$$

Notice now that for $n > 1$ and δ small enough we have $1/(1-\delta)^2 < 2/\delta$. Thus for some constant c_2 we also have $c_2 \leq \delta$. Therefore we have

$$\inf_{x \in \mathbb{R}^n} |x| \leq c_2 n^{-1/2} \implies |x| \leq \sqrt{n} \epsilon \leq 2\epsilon$$

where in the second inequality we used (5) combined with Lemma 2 and the definition of M . Now Proposition 12 gives

$$\inf_{x \in \mathbb{R}^n} |x| \leq c \epsilon^{1+\frac{1}{2n}} \log^{n+1}(1/\epsilon) n^{-1/n} \leq C_3 \epsilon$$