

课后作业 (Assignments)

一、 阅读教材 1.4 节，求解如下问题 (Problems)

1. 范式与主范式有何异同？
2. 主范式有哪些求解方法？
3. 教材第一章习题：题 11 (3 , 4) ，题 12 (2 , 3 , 4) ；
4. Use the truth table method to find the DNF of the following formulae.

Only use the variables actually occurring in the formula (not any extra ones) in the DNF. Which of the above is designed to convince you that a better method needs to be found?

(i) $R \leftrightarrow P \wedge (Q \rightarrow R)$

(ii) $P \rightarrow (Q \rightarrow (R \rightarrow S))$

(iii) $(P \rightarrow Q) \wedge (P \wedge \neg Q)$

5. Find a list of formulae which

(a) use no variables other than P , Q and R ; and

(b) have the following *partial*/truth table (two values missing, see Fig.1).

P	Q	R	$F = ?$
T	T	T	F
T	T	F	?
T	F	T	T
T	F	F	T
F	T	T	F
F	T	F	?
F	F	T	T
F	F	F	F

Fig.1 Truth table

二、 课外阅读 (Reading)



主析取范式的求法及其应用.pdf

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三、编程项目 (Programming) (Optional)

1. 输入命题公式，给出其真值表，并判断公式类型;
2. 输入命题公式，求解命题公式主范式.

请应用你的程序求解 一 (4 , 5) 题.