Problem 10.6

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Each column is one step of QMC1

In QMC1 we remove useless literals

$(x \wedge T) \vee (x \wedge F)$ is the same as $x \wedge (T \vee F)$

which is the same as x

Therefore we remove any literal that is redundant in such a way.

Initial	Reduced 1	Reduced 2
FFTT	FFTX	XFTX
FTFF	XFTF	TFXF
TFFF	XTFF	TXFF
TFTF	TFXF	
TTFF	TFTX	

The next step removes all the non-essential monomials.

Non-essentials are the monomials whose true statements can all be fulfilled by others.

If this can happen then there existence is useless.

	FFTT	FFTF	FTFF	TFFF	TFTF	TFTT	TTFF
$\bar{x_2}x_3$	T	T	F	F	T	T	F
$x_1\bar{x_2}\bar{x_4}$	F	F	F	T	T	F	F
$x_1\bar{x_3}\bar{x_4}$	F	F	F	T	F	F	T

$\therefore (\bar{x_2}x_3)+(x_1\bar{x_2}\bar{x_4})+(x_1\bar{x_3}\bar{x_4})$