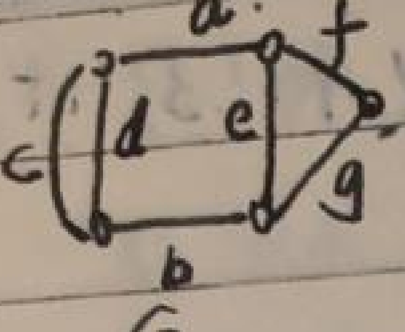
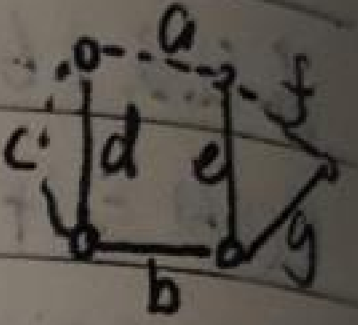
习题九、

16.  G的一棵生成树T如右图实线 

G

$C_a = adbe$, $C_c = cd$, $C_f = fge$, $C_{基} = \{C_a, C_c, C_f\}$

$S_b = \{a,b\}$, $S_d = \{a,c,d\}$, $S_e = \{a,e,f\}$, $S_g = \{f,g\}$

$S_{基} = \{S_b, S_d, S_e, S_g\}$

$C_{环} = \{C_0, C_1, C_2, C_3, C_4, C_5, C_6, C_7\}$

$C_0 = \phi$, $C_1 = cd$, $C_2 = adbe$, $C_3 = fge$, $C_4 = C_a \oplus C_c$, $C_5 = C_a \oplus C_f$

$C_6 = C_c \oplus C_f$, $C_7 = C_a \oplus C_c \oplus C_f$

$S_{断} = \{S_0, S_1, \cdots, S_{15}\}$

$S_0 = \phi$, $S_1 = \{a,b\}$, $S_2 = \{a,c,d\}$, $S_3 = \{a,e,f\}$, $S_4 = \{f,g\}$

$S_5 = S_1 \oplus S_2$, $S_6 = S_1 \oplus S_3$, $S_7 = S_1 \oplus S_4$, $S_8 = S_2 \oplus S_3$,

$S_9 = S_2 \oplus S_4$, $S_{10} = S_3 \oplus S_4$, $S_{11} = S_1 \oplus S_2 \oplus S_3$;

$S_{12} = S_1 \oplus S_2 \oplus S_4$, $S_{13} = S_1 \oplus S_3 \oplus S_4$, $S_{14} = S_2 \oplus S_3 \oplus S_4$

$S_{15} = S_1 \oplus S_2 \oplus S_3 \oplus S_4$

~~19. 由握手定理，$i-1+t=2i$，t为树叶个数。~~

~~即 $t = i+1$~~

有共同父结点的树叶

19. 设i个分支点时，$L = I + 2i$；$i+1$个时，令 v_1, v_2 为T中两个树叶，v是v_1、v_2所邻分支点，~~高度~~层数为h。删去v_1, v_2，有 $L - h - 2 = (I - h) + 2(i+1-1)$，即 $L = I + 2(i+1)$，证毕。