

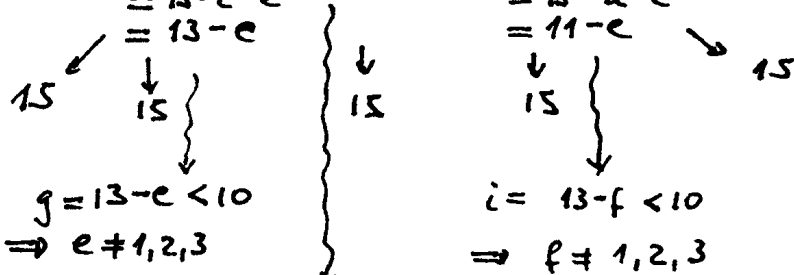
Lösungen / Solutions

1 a) $a=4 \quad b=9 \quad c \rightarrow 15=4+9+c \Rightarrow \underline{c=2}$

$d \quad e \quad f \rightarrow 15=d+e+f$

$g=15-4-d \quad h=15-9-e \quad i=15-c-f$
 $=11-d \quad =6-e \quad =13-f$
 $=15-c-e \quad =15-a-e \quad =11-e$
 $=13-e$

$\{a,b,\dots,i\} = \{1,2,\dots,9\}$



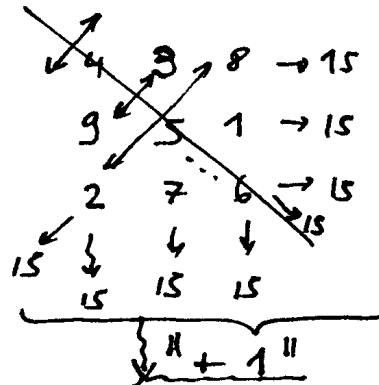
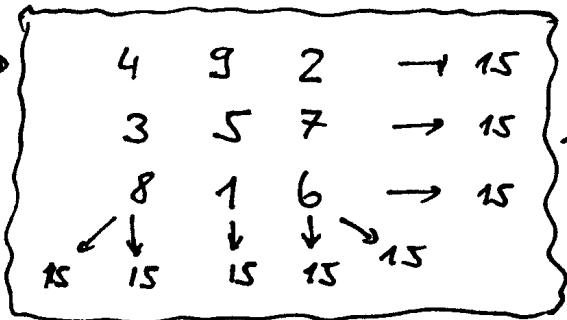
$h > 0 \Rightarrow e \neq 6, 7, 8, 9 \rightarrow e \neq a = 4$

$\Rightarrow e \neq 1, 2, 3, 4, 6, 7, 8, 9 \Rightarrow \underline{e=5}$

$\Rightarrow h = 6 - e = 6 - 5 = \underline{1}$

$\Rightarrow i = 11 - e = \underline{6}, \quad g = 13 - e = 13 - 5 = \underline{8}$

$8 = g = 11 - d \Rightarrow d = \underline{3}, \quad f = \dots 13 - i = 13 - 6 = \underline{7}$



b)

$4+1$	$3+1$	$8+1$	$\rightarrow 15+3$
$9+1$	$5+1$	$1+1$	$\rightarrow 15+3$
$2+1$	$7+1$	$6+1$	$\rightarrow 15+3$
\swarrow	\downarrow	\downarrow	\searrow
$15+3$	$15+3$	$15+3$	$15+3$

