13. (3) $\{4,5\}$

(4) $\{0,1,2,3,4,5,6,8,16,32\}$

14. (1) $\{3,4,\{3\},\{4\}\}$

(2) $\{3\}$

15. (1) $\{\phi,\{\phi\},\{\{\phi\}\},\{\phi,\{\phi\}\}\}$

(2) $\{\phi\}$

16. (1) $P(A)=\{\phi,\{\phi\},\{\{\phi\}\},\{\phi,\{\phi\}\}\}$

$\bigcup P(A)=\{\phi,\{\phi\},\{\phi\}\}$

(2) $\bigcup A=\{\phi,\{\phi\}\}$

$P(\bigcup A)=\{\phi,\{\phi\},\{\{\phi\}\},\{\phi,\{\phi\}\}\}$

17. (1) $A-(B\cup C)=A\cap\sim(B\cup C)$

$=A\cap\sim B\cap\sim C$

$=(A-B)\cap\sim C=(A-B)-C$

(2) $(A-B)-C=A\cap\sim B\cap\sim C$

$=(A\cap\sim B\cap\sim C)\cup\phi=(A\cap\sim(B\cup C))\cup(A\cap\sim(C\cap C))$

$=(A\cap\sim C)\cap(\sim B\cup C)$

$=(A-C)\cap\sim(B-C)=(A-C)-(B-C)$

18. (1) $\forall x, x\in A\wedge x\notin B\Leftrightarrow x\in B$

$\Rightarrow \forall x.\ x\in B\Rightarrow x\notin B$

$\Rightarrow B=\phi\Rightarrow A=\phi$ 故 $A=B=\phi$

(2) $A-B=B-A$

$\therefore A\cap\sim B=B\cap\sim A$

$\therefore A\cap\sim B\cap B=B\cap\sim A\cap B$

$\therefore \phi=B-A$ 即 $A-B=\phi$

$\therefore \forall x, x\in B\Rightarrow x\in A\wedge x\in A\Rightarrow x\in B$

$\therefore A=B$

19. (1) $(A-B)\cup(A\sim)$

$=(A\cap\sim B)\cup(A\cap C)$

$=((A\cap B)\cup A)\cap(A\cap\sim B\cup C)$

$=A\cap A\cap\sim B\cup C=A-(B\cap C)=A$

$\therefore A\cap(B\cap C)=\phi$

(2) 同(1)理 $A-(B\cap C)=\phi$

$\therefore A\subseteq B\cap C$

26. (1) $A\times B=(A-B)\cup(B-A)=\phi$

$\Leftrightarrow A-B=\phi$ 且 $B-A=\phi$

$\Rightarrow(\forall x.\ x\in A\Rightarrow x\in B\wedge\forall x\ x\in B\Rightarrow x\in A)$

$\Rightarrow A=B$

(2) $A=\phi\cup\phi=\phi$ 即可

28. 记 $A_1=\{x\mid x/2\in\mathbb{Z}\wedge(1\le x\le 25)\}$ $A_2=\{x\mid x/3\in\mathbb{Z}\wedge(1\le x\le 25)\}$

$A_3=\{x\mid(x\in 5\in\mathbb{Z})\wedge(1\le x\le 25)\}$

则 $|A_1|=\lfloor\frac{25}{2}\rfloor=12$, $|A_2|=\lfloor\frac{25}{3}\rfloor=8$,

$|A_3|=\lfloor\frac{25}{5}\rfloor=5$,

$|A_1\cap A_2|=4$, $A_2\cap A_3=\phi$, $|A_1\cap A_3|=2$,

$|A_1\cap A_2\cap A_3|=8$ $\therefore |A_1\cup A_2\cup A_3|=18$