Section 1.8

18. Proof. $ax+b=c \to ax=c-b \to x=\frac{c-b}{a}$ since $a\neq 0$

$ax+b=a\left(\frac{c-b}{a}\right)+b \to c-b+b=c$

$x=\frac{c-b}{a}$ is an unique solution of the equation $ax+b=c$

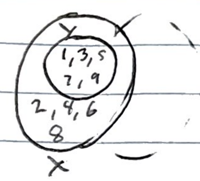
Section 2.1

6a.) The second is a subset of the first

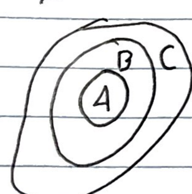
6b.) The second is a subset of the first

6c.) Neither is a subset of each other

14.)



16.)



22.a) 0 22.b) 1 22.c) 2 22.d) 3

34a.) $=\{(a,x,0),(a,x,1),(a,y,0),(a,y,1),(b,x,0),(b,x,1),(b,y,0),(b,y,1),(c,x,0),(c,x,1),(c,y,0),(c,y,1)\}$

34.c) $=\{(0,a,x),(0,a,y),(0,b,x),(0,b,y),(0,c,x),(0,c,y),(1,a,x),(1,a,y),(1,b,x),(1,b,y),(1,c,x),(1,c,y)\}$

Section 2.2

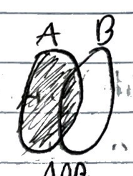
4.a) $\{a,b,c,d,e,f,g,h\}$

4.b) $\{a,b,c,d,e\}$

4.c) $\{\emptyset\}$

4.d) $\{f,g,h\}$

12.

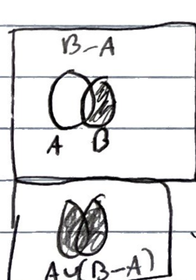


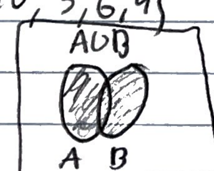
That's all of A

14. $A=\{1,5,7,8,3,6,9\}$

$B=\{2,10,3,6,9\}$

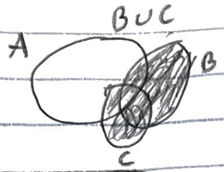
16.e)

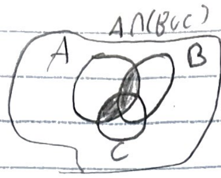




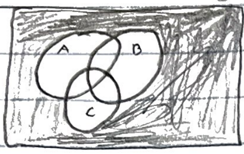
they are equal

28,a)



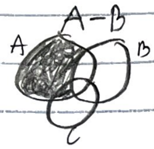


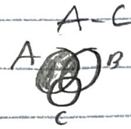
28.b)

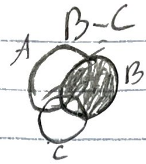


$\overline{A} \cap \overline{B} \cap \overline{C}$

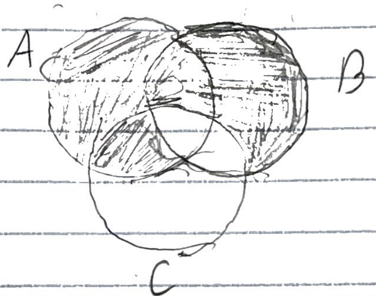
28.C)







$(A-B) \cup (A-C) \cup (B-C)$



58a.) $\{3,4,5\} = 0011100000$

58.b) $\{1,3,6,10\} = 1010010001$

58.c) $\{2,3,4,7,8,9\} = 0111001110$