

10/19/23

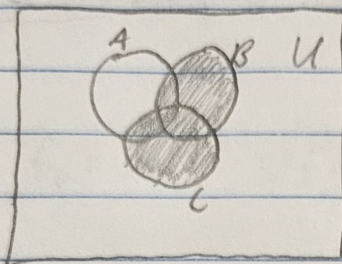
HW 6

Josiah Schmitz

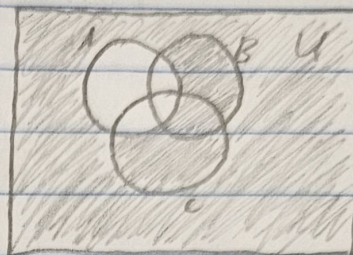
3.2.2 Answer c

3.2.15 b. True d. True e. False,  $x=36$ 

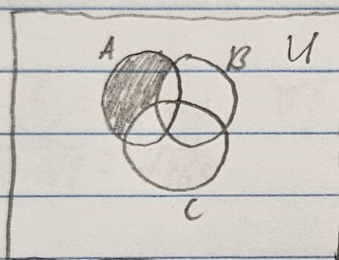
6.1.17 b.



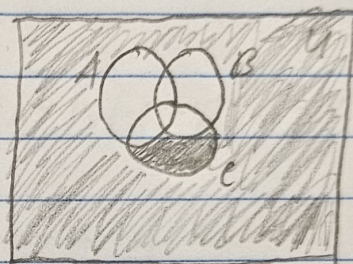
c.



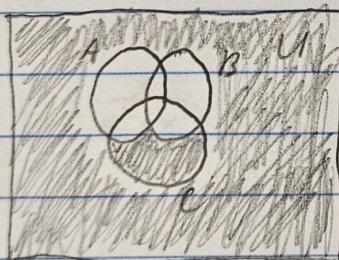
d.



e.



f.

6.2.20  $A \subseteq C$  means that every element of  $A$  is in  $C$ . $B \subseteq C$  means that every element of  $B$  is in  $C$ .

$A \cup B$  refers to every element in  $A$  or  $B$ . Since every element in  $A$  and every element in  $B$  is in  $C$ , every element in  $A \cup B$  is in  $C$ .  $\therefore A \cup B \subseteq C$

6.2.35 Suppose there is an element  $x$ , that is in  $A \cap C$ .

This means  $x \in A$ ,  $x \in B$ , and  $x \in C$ . However,  $B \cap C = \emptyset$  implies that there is no  $x$  such that  $x \in B$  and  $x \in C$ .

This is a contradiction.  $\therefore A \cap C = \emptyset$  is true.