

Sean Reilly

Assignment: Section 2.1: 8, 10, 14, 18, 20,32 ( Edition - 7)

8.

a) no

b) no

c) yes

d) yes

e) yes

f) no

10.

a) true

b) true

c) false

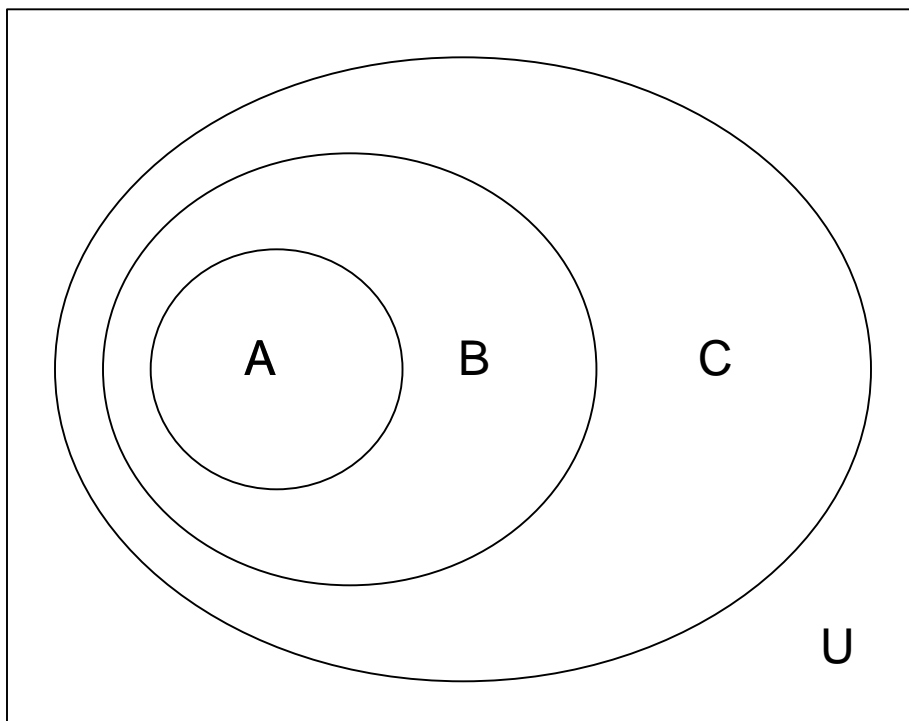
d) true

e) true

f) true

g) false

14.



18. Let:

$$A = \emptyset$$

$$B = \{\emptyset\}$$

Now  $\emptyset \in \{\emptyset\}$  and  $\emptyset \subseteq \{\emptyset\}$

So,  $A \in B$  and  $A \subseteq B$ .

a)  $|\phi| = 0$

b)  $|\{\phi\}| = 1$

c)  $|\{\phi, \{\phi\}\}| = 2$

d)  $|\{\phi, \{\phi\}, \{\phi, \{\phi\}\}\}| = 3$

32.

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

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

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

d)  $\{(x, x, x), (x, x, y), (x, y, x), (x, y, y),$   
 $(y, x, x), (y, x, y), (y, y, x), (y, y, y)\}$