

Sec 2.3, #21

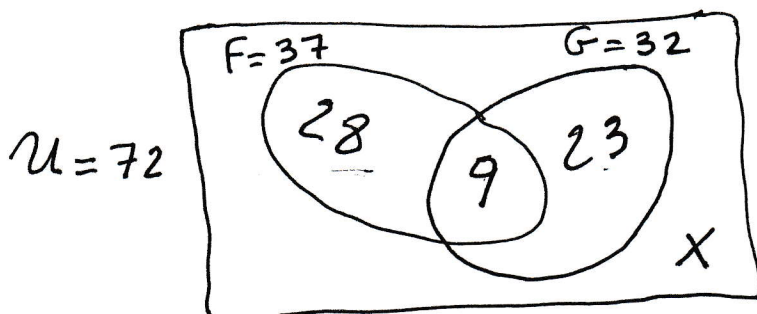
$$U = 72,$$

$$F = 37,$$

$$G = 32$$

$$F \cap G = 9$$

$$\begin{aligned} \text{Neither} &= ? \\ &= x \end{aligned}$$



$$\begin{aligned} 28 + 9 + 23 + x &= 72 \\ x &= 12 \end{aligned}$$

$$n(F) \text{ only} = 28$$

$$n(F - G) = 28, \quad n(F \cap G') = 28$$

$$n(G) \text{ only} = 23$$

$$n(G - F) = 23, \quad n(G \cap F') = 23$$

$$\begin{aligned} n(G \cup F) &= G + F - G \cap F \\ &= 32 + 37 - 9 \\ &= 60 \end{aligned}$$

$$n(G \cup F) = 28 + 9 + 23 = 60$$

Venn Diagram