

# 1 Mengenlehre

## 1.13 Übungen Frommenwiler

8. a)  $\underline{A \subset A}$

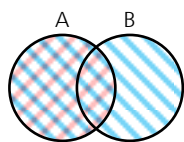
c)  $\underline{A \not\subset B}$

d)  $\underline{D \subset A}$

12. a)  $\{ \}, \{32\}, \{80\}, \{32, 80\}$

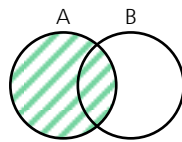
c)  $\{16, 32, 64\}$

16. c)  $A \cap (A \cup B) = \underline{\underline{A}}$



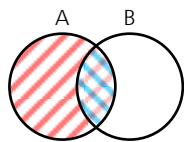
$\underline{A} \cap (\underline{A \cup B})$

→



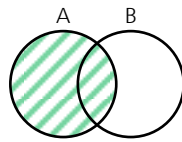
$\underline{A} \cap (\underline{A \cup B})$

d)  $A \cup (A \cap B) = \underline{\underline{A}}$



$\underline{A} \cup (\underline{A \cap B})$

→

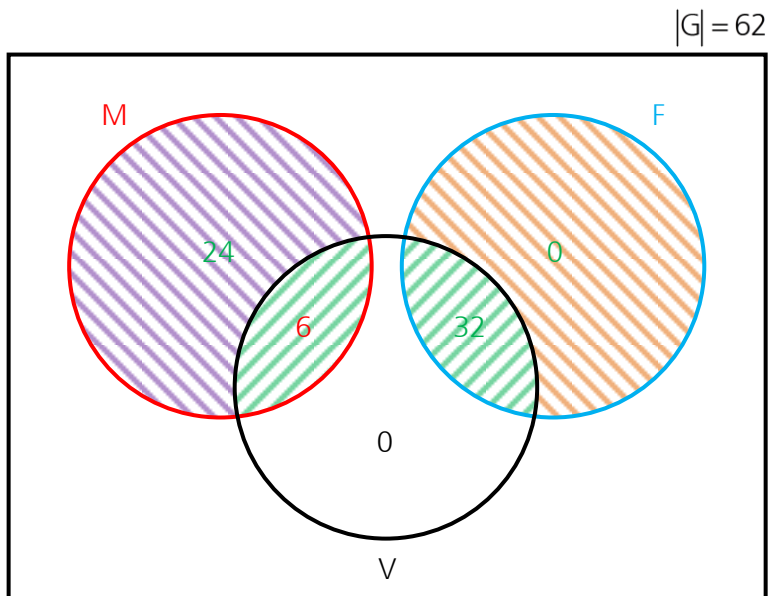


$\underline{A} \cup (\underline{A \cap B})$

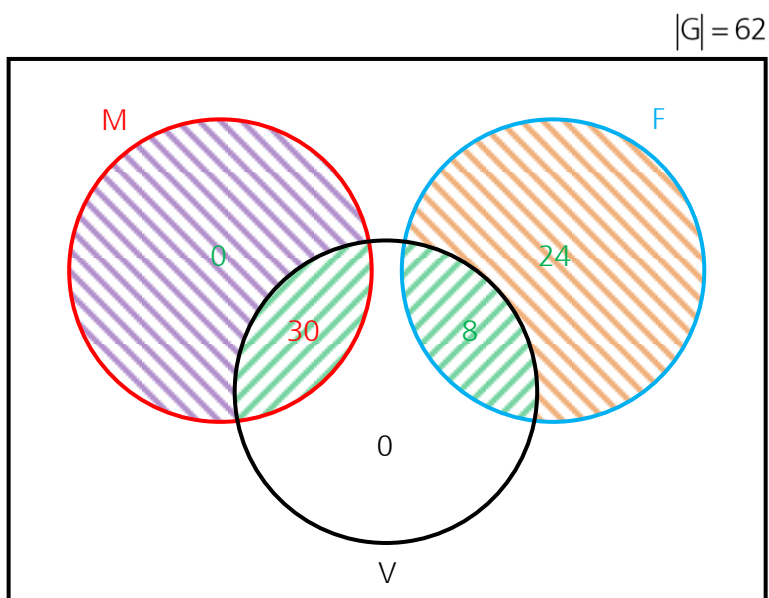
18. a)  $\{u\}, \{u, v\}$   
 b)  $\{w\}, \{u, w\}, \{v, w\}, \{u, v, w\}$

20. Analyse der Situation:

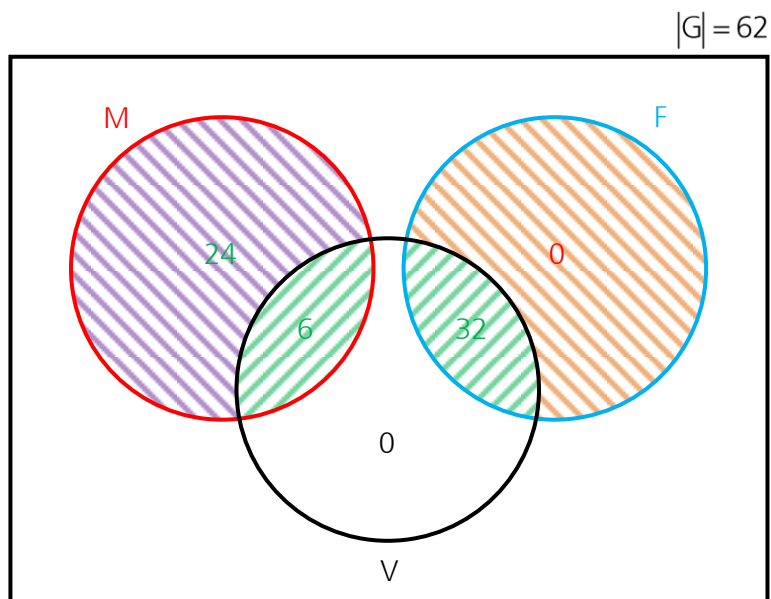
- a) Geg:  $|G| = 62, |F| = 32, |M| = 30, |V| = 38$   
 Ges:  $|M \cap V| = \underline{\underline{6}}$



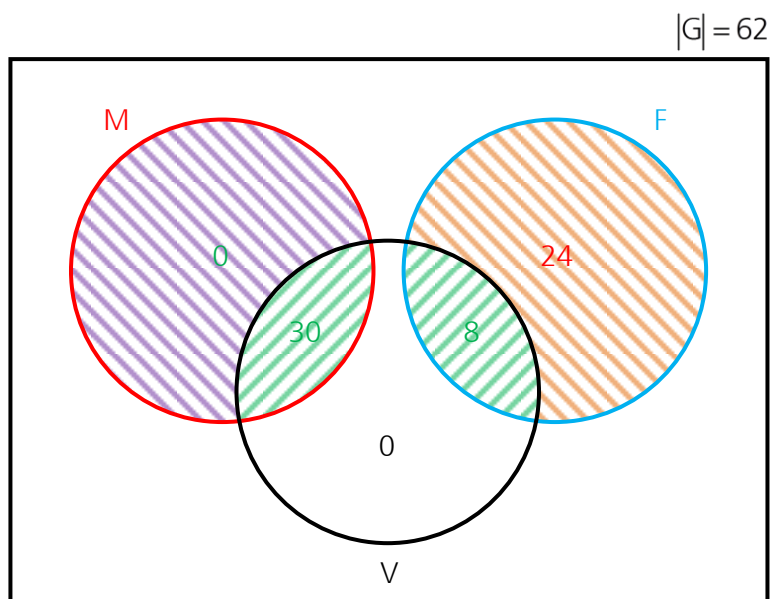
- b) Geg:  $|G| = 62, |F| = 32, |M| = 30, |V| = 38$   
 Ges:  $|M \cap V| = \underline{\underline{30}}$



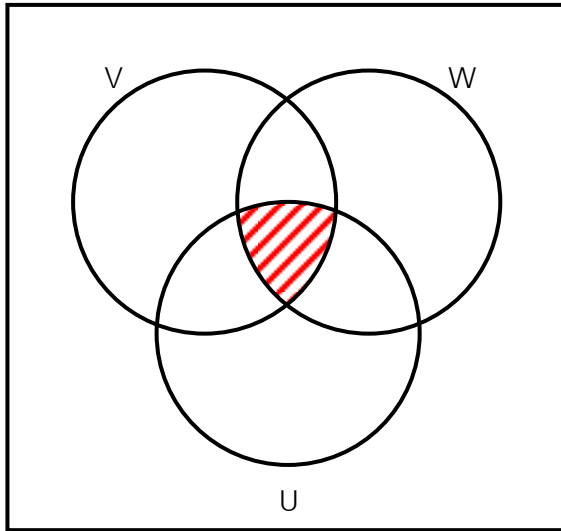
- c) Geg:  $|G| = 62$ ,  $|F| = 32$ ,  $|M| = 30$ ,  $|V| = 38$   
 Ges:  $|F \setminus V| = \underline{\underline{0}}$



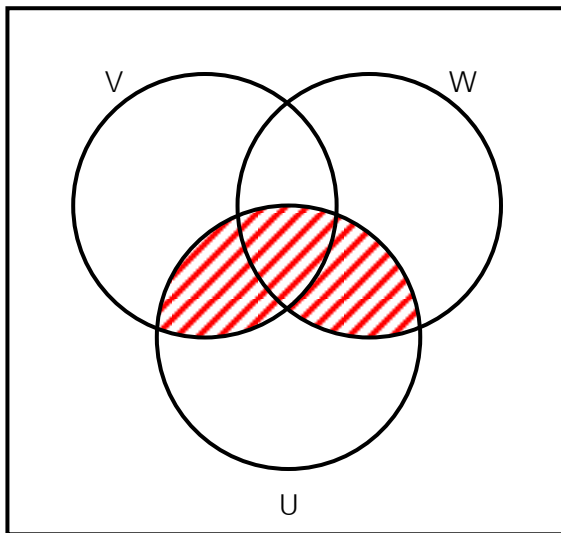
- d) Geg:  $|G| = 62$ ,  $|F| = 32$ ,  $|M| = 30$ ,  $|V| = 38$   
 Ges:  $|F \setminus V| = \underline{\underline{24}}$



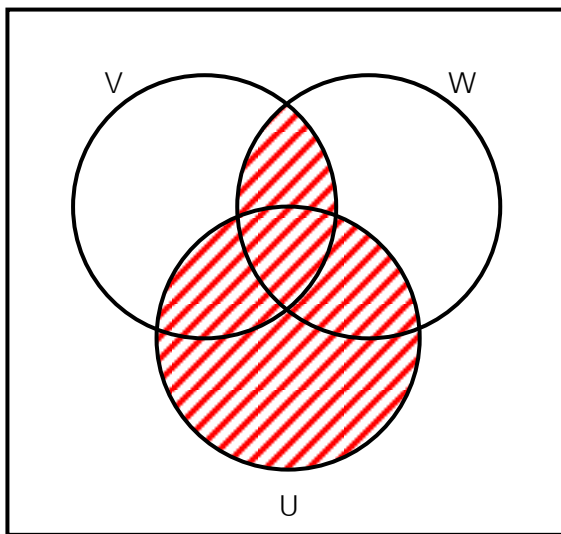
21. a)

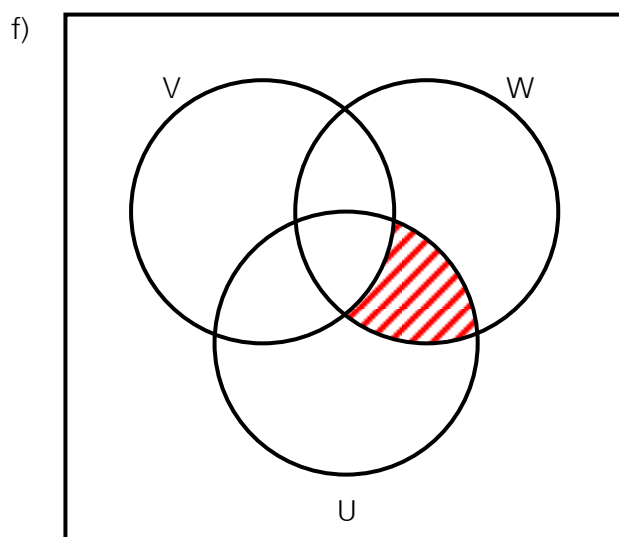
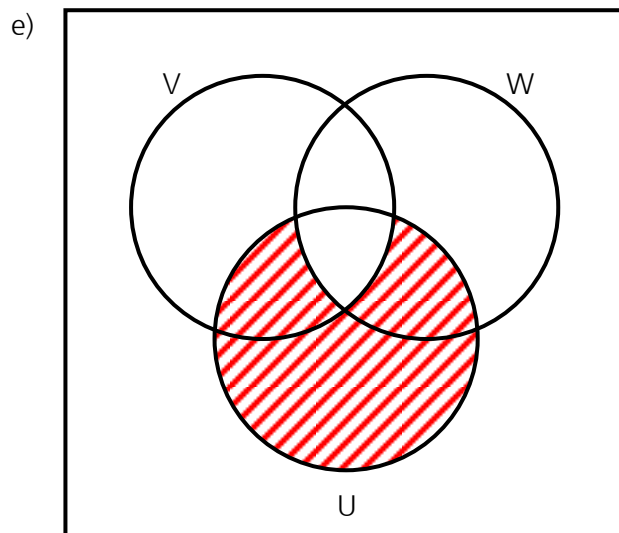
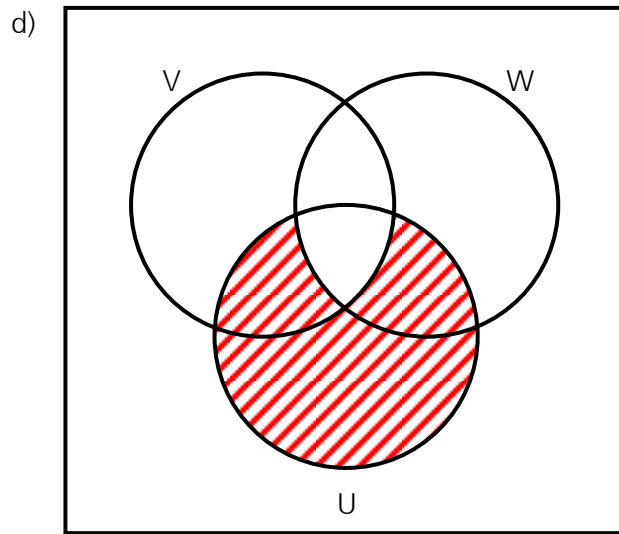


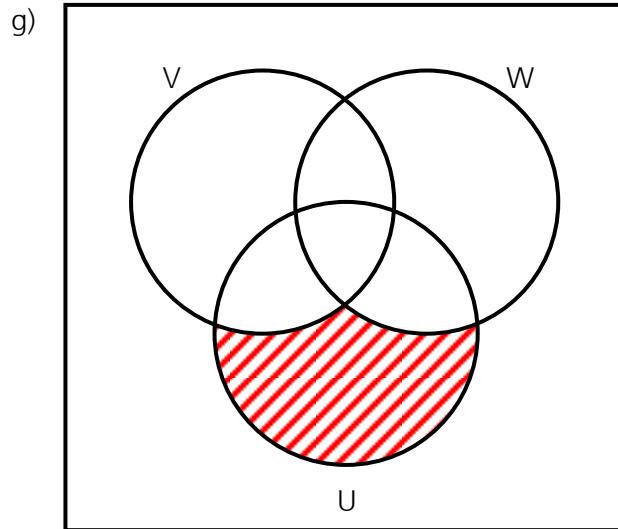
b)



c)

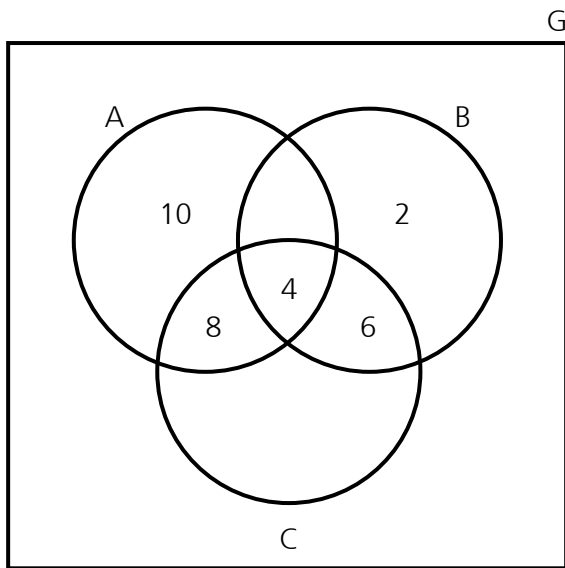






22. a)  $(U \cap W) \setminus V$
- b)  $U \cup (V \cap W)$
- c)  $(U \cap V) \cup (V \cap W)$
- d)  $V \setminus (U \cup W)$
- e)  $(U \cap V) \cup (U \cap W) \cup (V \cap W)$
- f)  $U \setminus (V \cap W)$

23.



$$A = \{4, 8, 10\}$$

$$B = \{2, 4, 6\}$$

$$C = \{4, 6, 8\}$$