

1. a)  $F = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$

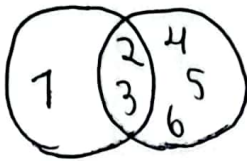
b)  $G = \{3, 5, 7, 9, 11, 13, \dots\}$

c)  $H = \{4, 6, 8, 10, 12, 14, 16\}$

d)  $I = \{2, 3, 4, 5, 6, 7, 8, 9\}$

e)  $J = \{4\}$

2.



3. a)  $L = A \cup B = \{1, 2, 3, 4, 5, 6\}$

b)  $M = A \cap B = \{2, 3\}$

c)  $N = A - B = \{1\}$

d)  $O = B - A = \{4, 5, 6\}$

4. a)  $3 \subseteq A$

b)  $F \not\subseteq C$

c)  $A \not\subseteq B$

d)  $B \not\subseteq C$

e)  $C \supseteq A$

f)  $C \not\subseteq B$

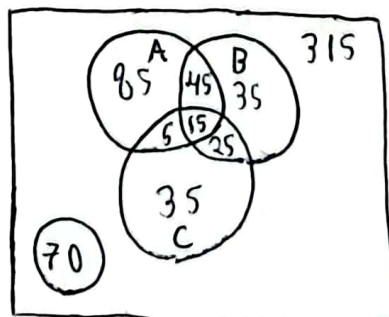
5.  $P(A) = \{\{2\}, \{5\}, \{7\}, \{2, 5\}, \{5, 7\}, \{2, 7\}, \{2, 5, 7\}\}$

6. a) 315

b) 75

c) 165

d) 85



7. 8

$$2^m - 2 = 254$$

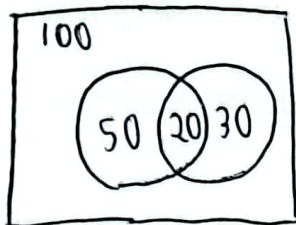
$$2^m = 254 + 2$$

$$2^m = 256$$

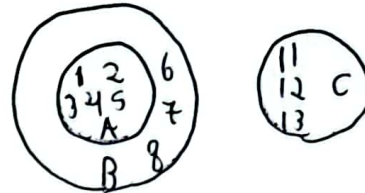
$$2^8 = 256$$

$$m = 8$$

8. 30



9.



10. a)  $X = A \cup B = \{1, 2, 3, 4, 5, 6, 7, 8\}$

b)  $Y = A \cap B = \{1, 2, 3, 4, 5\}$

c)  $Z = A \cup C = \{1, 2, 3, 4, 5, 11, 12, 13\}$

d)  $W = A \cap C = \emptyset$

e)  $P = C \setminus B = \{6, 7, 8\}$

f)  $U = C \setminus A = \{11, 12, 13\}$

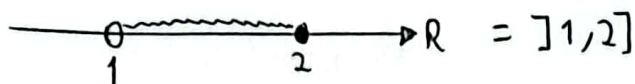
g)  $K = (A \cup C) - B = \{11, 12, 13\}$

h)  $T = B - (A \cap C) = \{1, 2, 3, 4, 5, 6, 7, 8\}$

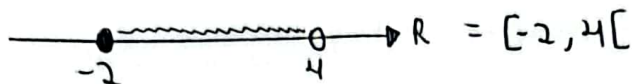
i)  $V = C \setminus (A \cup B) = \{11, 12, 13\}$

1.  $P(A) = \{\{-5\}, \{7\}, \{11\}, \{14\}, \{-5, 7\}, \{-5, 11\}, \{-5, 14\}, \{7, 11\}, \{7, 14\}, \{11, 14\}, \{-5, 7, 11\}, \{-5, 7, 14\}, \{7, 11, 14\}, \{-5, 7, 11, 14\}\}$ .

12. a)  $\{x \in \mathbb{R} \mid 1 < x \leq 2\}$



b)  $\{x \in \mathbb{R} \mid -2 \leq x < 4\}$



c)  $\{x \in \mathbb{R} \mid x > -3\}$



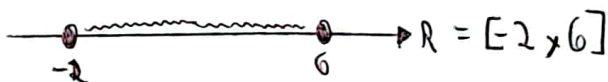
d)  $\{x \in \mathbb{R} \mid x \leq 5\}$



e)  $\{x \in \mathbb{R} \mid -1 < x < 2\}$



f)  $\{x \in \mathbb{R} \mid -2 \leq x \leq 6\}$



13. A =

B =

$A \cup B =$

$A \cap B =$

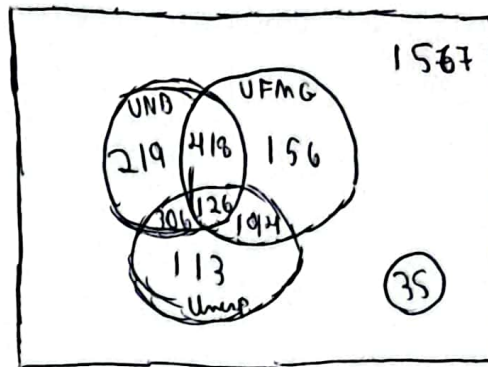
$(A \cup B) - (A \cap B) =$

14.  $A = \{1, 2, 3, \{4, 5\}\} - B = \{1, 4, 5, \{4\}, 6\} = \{1, 2, \{4, 5\}\}$  3 elements  
 $= 2^3 = 8 \text{ subconjuntos}$

15. V, F, V, F, V, V, V, F

16. a) 1567 vestibulares

b) 488 vestibulares



17.  $A \Delta B = (A - B) \cup (B - A)$

$A = \{x \in \mathbb{R} \mid -4 \leq x < 3\}$        $B = \{x \in \mathbb{R} \mid -2 < x \leq 2\}$

$A =$

$B =$

$A - B =$

$B - A =$

$A \Delta B = [-4, 2] \cup [2, 3]$