1. a) $F = \{0,1,2,3,4,5,6,7,8,9\}$
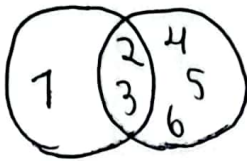
   b) $G = \{3,5,7,9,11,13...\}$

   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) $7 \not\subseteq C$

   c) $A \not\subseteq B$

   d) $B \not\subseteq C$
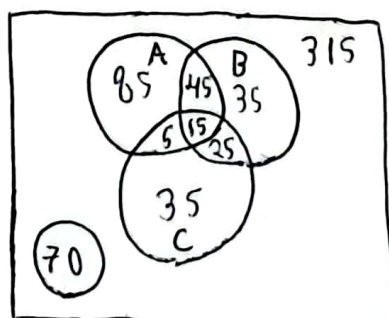
   e) $C \supseteq A$

   f) $C \not\subseteq B$

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

6. a) 315
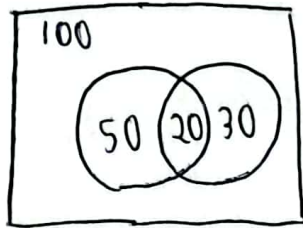
   b) 75

   c) 165

   d) 85

7. 8

$$2^m - 2 = 254$$
$$2^m = 254 + 1$$
$$2^m = 256$$
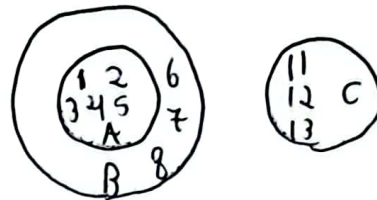$$2^8 = 256$$
$$m = 8$$

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) $W = A \cap C = \{\emptyset\}$

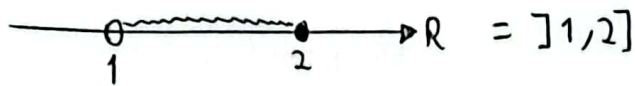e) $P = C_B^A = \{6,7,8\}$

f) $U = C_A^B = \{1,2,3,4,5\}$

g) $K = (A \cup C) - B = \{11,12,13\}$
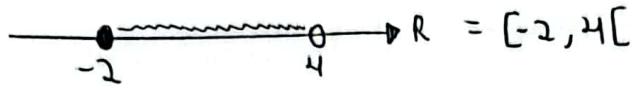
h) $T = B - (A \cap C) = \{1,2,3,4,5,6,7,8\}$

j) $V = C_A^{A \cup B} = A - A \cup B = \{\emptyset\}$

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

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

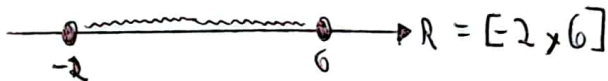$\mathbb{R} =]1,2]$

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

$\mathbb{R} = [-2,4[$

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

$\mathbb{R} =]-3,+\infty[$

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

$\mathbb{R} =]\infty-,5]$

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

$\mathbb{R} =]-1,2[$

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

$\mathbb{R} = [-2,6]$

13. $A = $

$B = $

$A \cup B = $

$A \cap B = $

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

$\mathbb{R} =]-3,0[/]1,2[$

14. $A = \{1,2,3\{4,5\}\} - B = \{3,4,5\{4\},6\} = \{1,2,\{4,5\}\}$

$\overbrace{\phantom{\{1,2,\{4,5\}\}}}^{3\ elementos}$

$= 2^3 = 8$ subconjuntos

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

16. a) 1567 vestibulandos

b) 488 vestibulandos
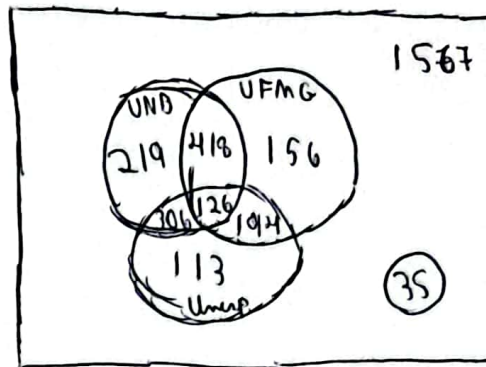
17. $A \triangle B = (A-B) \cup (B-A)$

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

$A = $ (number line from -4 to $?$) $\to R$

$B = $ (number line from -2 to 2) $\to R$

$A-B = $ (number line -4, 2, 2, 3) $\to R$

$B-A = $ (empty) $\to R$, $\varnothing$

$A \triangle B = ([-4,-2[/ [2,3[$