1. C = {1, 3, 6} . A = {2, 4, 18} e B {3, 5, 8}

produto cartesiano = (1, 2, 3), (1, 2, 5), (1, 2, 8)
(1, 4, 3) (1, 4, 5) (1, 4, 8) (1, 18, 3)
(1, 18, 5) (1, 18, 8) (3, 2, 3) (3, 2, 5)
(3, 2, 8) (3, 4, 3) (3, 4, 5) (3, 4, 8)
(3, 18, 3) (3, 18, 5) (3, 18, 8) (6, 2, 3)
(6, 2, 5) (6, 2, 8) (6, 4, 3) (6, 4, 5)
(6, 4, 8) (6, 18, 3) (6, 18, 5) (6, 18, 8)

Cardinalidade = 3 x 3 x 3 = 27

2. A {11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35} = Cardinalidade = 13

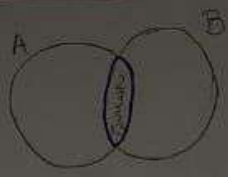
B {Salvador, Fortaleza, São Luís, João Pessoa, Recife, Maceió, Aracaju, Natal, Teresina} = Cardinalidade = 9

C = ∅ = Cardinalidade = 0

D = {0, 1, 4, 9, 16, 25, 36, 49, 64, 81, 100} = Cardinalidade = 11

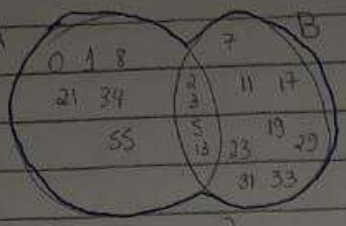
E = {f, v, s, z, x, j} = cardinalidade = 6

F = {2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97} Cardinalidade = 25

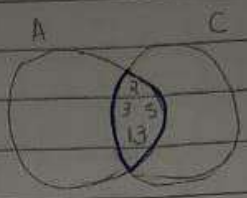


3-a) $A \cap B = \{2, 3, 5, 13\}$

b) $A \cup B = \{0, 1, 2, 3, 5, 7, 8, 11, 13, 17, 19, 21, 23, 29, 31, 33, 34, 55\}$

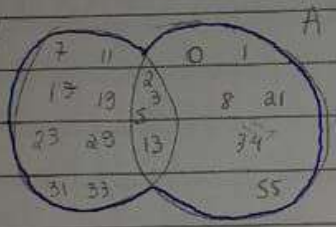


c) $A \cap C = \{2, 3, 5, 13\}$

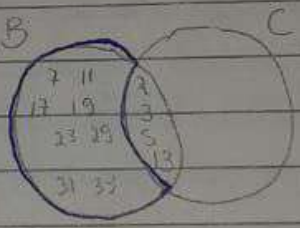


d) $C - A = \varnothing$

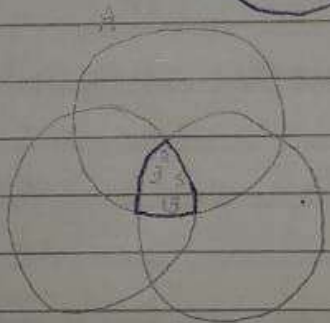
e) $B \cup A = \{0, 1, 2, 3, 5, 7, 8, 11, 13, 17, 19, 21, 23, 29, 31, 33, 34, 55\}$



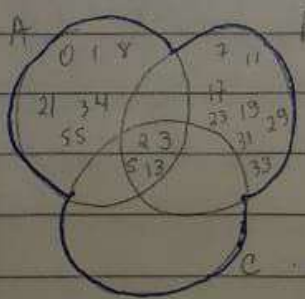
f) $B - C = \{7, 11, 17, 19, 23, 29, 31, 33\}$

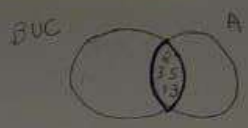


g) $A \cap B \cap C = \{2, 3, 5, 13\}$



h) $A \cup B \cup C = \{0, 1, 2, 3, 5, 7, 8, 11, 13, 17, 19, 21, 23, 29, 31, 33, 34, 55\}$



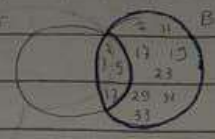


i) $A \cap (B \cup C) = \{2, 3, 5, 13\}$

j) $(A \cap B) \cup (B - A) = \{2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 33\}$

$A \cap B = \{2, 3, 5, 13\}$

$B - A = \{7, 11, 17, 19, 23, 29, 31, 33\}$



k) $(A - B) \cap (C - A) = \varnothing$

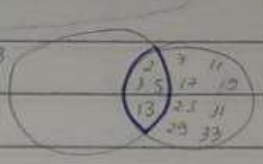
$A - B = \{0, 1, 8, 21, 34, 55\}$

$C - A = \varnothing$

l) $(A \cap B) \cap (B \cup C) = \{2, 3, 5, 13\}$

$A \cap B = \{2, 3, 5, 13\}$

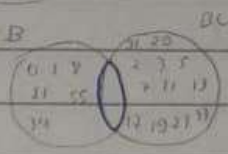
$B \cup C = \{2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 33\}$



m) $(A - B) \cap (B \cup C) = \varnothing$

$A - B = \{0, 1, 8, 21, 34, 55\}$

$B \cup C = \{2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 33\}$

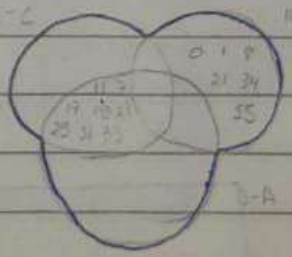


n) $(B - C) \cup (A - C) \cup (B - A) = \{0, 1, 7, 8, 11, 17, 19, 21, 23, 29, 31, 33, 34, 55\}$

$B - C = \{7, 11, 17, 19, 23, 29, 31, 33\}$

$A - C = \{0, 1, 8, 21, 34, 55\}$

$B - A = \{7, 11, 17, 19, 23, 29, 31, 33\}$

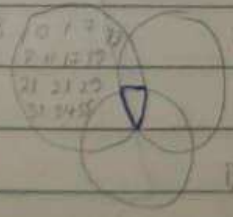


o) $(A \Delta B) \cap (A \Delta C) \cap (B \Delta C) = \varnothing$

$A \Delta B = \{0, 1, 7, 8, 11, 17, 19, 21, 23, 29, 31, 33, 34, 55\}$

$A \Delta C = \{\varnothing\}$

$B \Delta C = \{\varnothing\}$

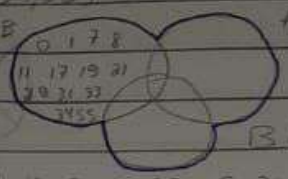


p) $(A \Delta B) \cup (A \Delta C) \cup (B \Delta C) = \{0, 1, 7, 8, 11, 17, 19, 21, 23, 29, 31, 33, 34, 55\}$

$A \Delta B = \{0, 1, 7, 8, 11, 17, 19, 21, 23, 29, 31, 33, 34, 55\}$

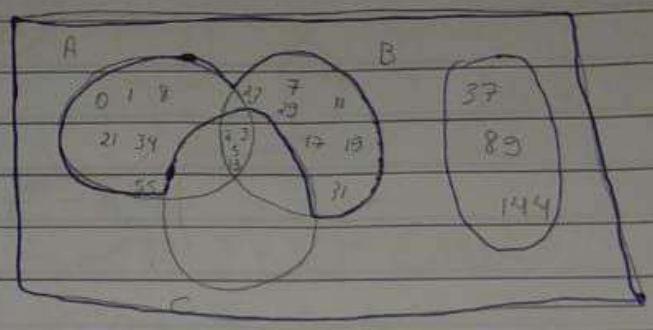
$A \Delta C = \varnothing$

$B \Delta C = \varnothing$

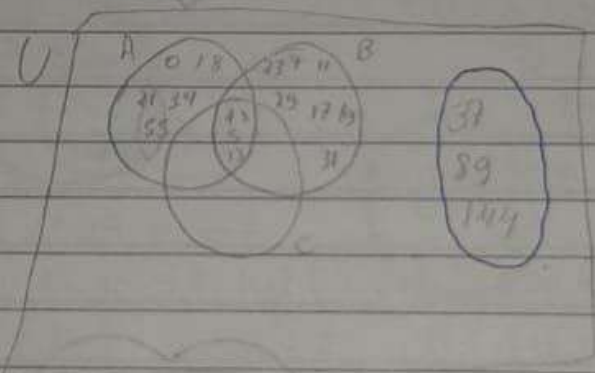


q) $U - (A \cap B \cap C) = \{0, 1, 7, 8, 11, 17, 19, 21, 23, 29, 31, 34, 37, 55, 89, 144\}$

$A \cap B \cap C = \{2, 3, 5, 13\}$

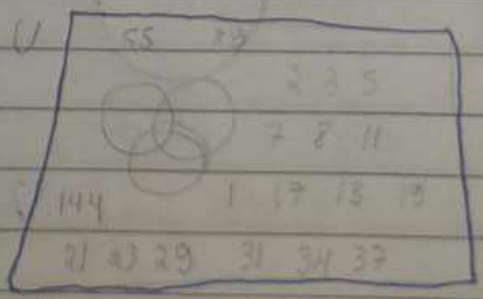


r) $U - (A \cup B \cup C) = \{37, 89, 144\}$



s) $U - ((A \Delta B) \cap (A \Delta C) \cap (B \Delta C)) = \{0, 2, 3, 5, 7, 8, 11, 13, 17, 19, 21, 23, 29, 31, 34, 37, 55, 89, 144\}$

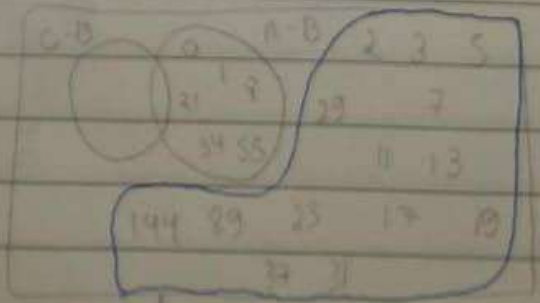
$((A \Delta B) \cap (A \Delta C) \cap (B \Delta C)) = \varnothing$



t) $U - ((C - B) \cup (A - B))$

$C - B = \varnothing$

$A - B = \{0, 1, 8, 21, 34, 55\}$



$\{2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31,$

$= 37, 89, 144\}$

Jandaia

t) U-((C-B) ∪ (A-B) = {2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 89, 144}

4-a) V - 3 ∈ A, A corresponde ao conjunto dos ímpares naturais, encaixando, assim, o número 3.

b) F, pois o conjunto B corresponde aos números naturais, -3 sendo negativo não se encaixa, é um número inteiro.

c) F, pois o -12 não corresponde a um número natural, não podendo se encaixar, então no conjunto C.

d) F, pois 15 é natural e múltiplo de 3, então, pertence a C.

e) V, pois A sendo números ímpares, não está contido em B, que são números pares.

f) V, pois conjuto A é diferente do conjunto C

g) V, pois B e A não apresentam elementos iguais

h) V, pois os elementos que apresentam interseção em A e C, não são iguais aos elementos de B.

ii) V, A união com B correspondem ao conjunto dos números naturais.

Jandaia

5- $X = (A' \cap B) \cap (C \cap D') = \emptyset$

$\{5\} \cap \{0\} = \emptyset$

Conjunto dos pares = $\emptyset$ Conjunto vazio

Cardinalidade = 0

6- a) $A \cap B \cap C = \{6, 7\}$

b) $(A \cap B \cap C)' = \{1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15\}$

c) $(A' \cup B) \cup C' = \{1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15\}$

d) $(A \cap B)' \cup (A \cap C) \cup (B \cap C)' = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15\}$

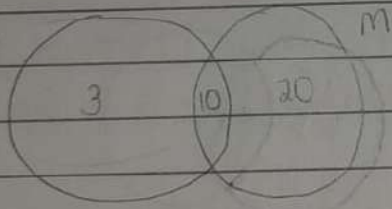
e) $(U - A) - (U - B) - (U - C) = \{11, 12, 13\}$

f) $(A \cap B) \cup (A \Delta C) \cup (B \Delta C) = \{1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13\}$.

g) $(A \cap B \cap C) \cup (A \cap B) \cup (A \cap C) \cup (B \cap C) = \{3, 5, 6, 7, 8, 9, 11, 12, 13\}$

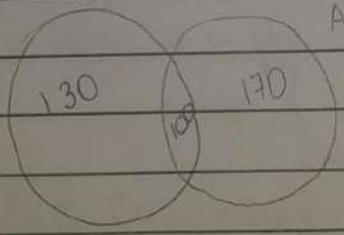
7- $C = \{2, 4, 6\}$

8.



7 estudantes não estudam nem matemática nem física

9.



Inglês = 230

Total da escola = 400

230 alunos estudam inglês. na escola há 400 alunos no total.