

Matemática discreta - Lista 4 - Victor Romeros e Vaniclus Romeros

1a) Domínio = $\{ \mathbb{R} \}$

Imagem = $\{ y \in \mathbb{R} / -1 \leq y \leq 1 \}$

b) Domínio = $\{ \mathbb{R} \}$

Imagem = $\{ \mathbb{R} \}$

2a)

	3	4	5	6	10
2	0	0	0	0	0
3	1	0	0	0	0
4	0	1	0	0	0
5	0	0	1	0	0

Domínio: $\{ 3, 4, 5 \}$

Imagem: $\{ 3, 4, 5 \}$

Paras: $\{ (3,3), (4,4), (5,5) \}$

b)

	3	4	5	6	10
2	0	0	0	1	0
3	0	1	0	0	0
4	1	0	0	0	0
5	0	0	0	0	0

Domínio: $\{ 2, 3, 4 \}$

Imagem: $\{ 3, 4, 6 \}$

Paras: $\{ (2,6), (3,4), (4,3) \}$

c)

	3	4	5	6	10
2	0	0	0	0	0
3	0	0	0	0	0
4	1	0	0	0	0
5	0	1	0	0	0

Domínio: $\{4, 5\}$

Imagem: $\{3, 4\}$

Paras: $\{(4, 3), (5, 4)\}$

d)

	3	4	5	6	10
2	1	1	1	1	1
3	1	1	1	1	1
4	0	1	1	1	1
5	0	0	1	1	1

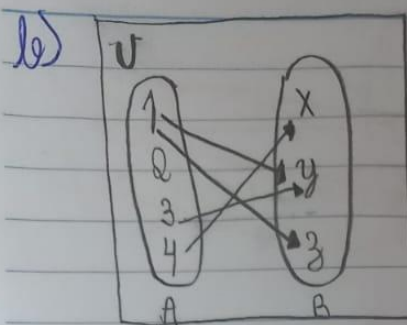
Domínio: $\{A\}$

Imagem: $\{B\}$

Paras: $\{(2, 3), (2, 4), (2, 5), (2, 6), (2, 10), (3, 3), (3, 4), (3, 5), (3, 6), (3, 10), (4, 4), (4, 5), (4, 6), (4, 10), (5, 5), (5, 6), (5, 10)\}$

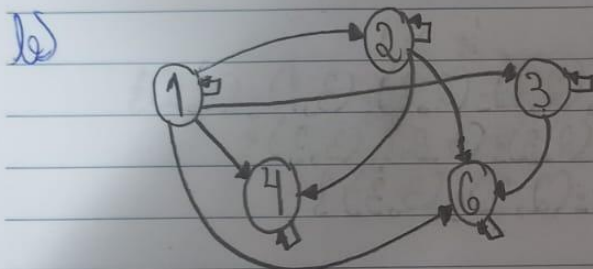
3) a)

	x	y	z
1	0	1	1
2	0	0	0
3	0	1	0
4	1	0	1

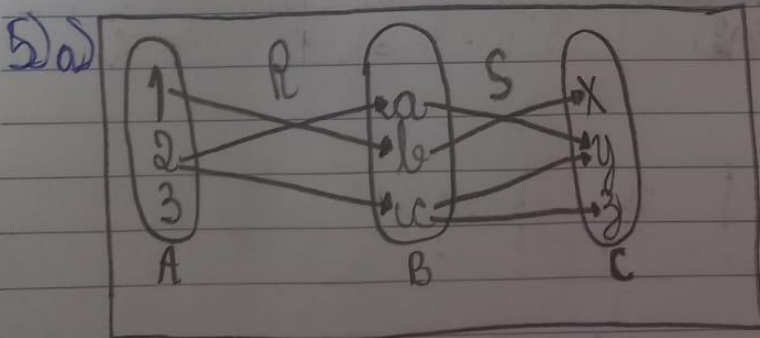


c) $\{(x, 4), (y, 1), (y, 2), (z, 1), (z, 4)\}$
 d) $\{(1, 3), (4, 3)\}$
 e) $\{B\}$

4) a) $\{(1, 1), (1, 2), (1, 3), (1, 4), (1, 6), (2, 2), (2, 4), (2, 6), (3, 3), (3, 6), (4, 4), (4, 6)\}$



c) $\{(6, 1), (6, 2), (6, 3), (6, 6), (4, 1), (4, 2), (4, 4), (3, 3), (3, 1), (2, 2), (2, 6), (1, 1)\}$



b) R:

	a	b	c
1	0	1	0
2	0	1	1
3	0	0	0

S:	x	y	z
a	0	1	0
b	1	0	0
c	0	1	1

RoS:	x	y	z
1	1	0	0
2	0	1	1
3	0	0	0

c) $R \cap S = \{(1,2); (3,3)\}$

b) $R \cup S = \{(1,1); (1,2); (1,3); (2,1); (2,3); (3,1); (3,3)\}$

c) $S \circ R = \{(1,1); (1,2); (1,3); (2,3); (3,2); (3,3)\}$

d) $S \circ S = \{(1,1); (1,2); (2,2); (2,3); (3,3)\}$

Z) R: Subrejetora

S: Total e Subrejetora

T: Subrejetora

V: Funcional e Injetora

W: Total e Subrejetora