

Hoja de trabajo # 4

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1 Ejercicio # 1

1. $a := \{1, 2, 4, 8, 16, 32, 64\}$
2. $b := \{n \in \mathbb{N} \mid \exists x \in \mathbb{N} . x = n/5\}$
3. $c := \{n \in \mathbb{N} \mid \exists x \in \mathbb{N} . n = x * x\}$
4. $d := \{n \in \mathbb{N} \mid \exists i \in \mathbb{N} . n = 2^i \wedge n < 100\}$
5. $e := \{n \in \mathbb{N} \mid \exists x \in \mathbb{N} . x = \sqrt{n}\}$
6. $f := \{n \in \mathbb{N} \mid \exists x \in \mathbb{N} . n = x + x + x + x + x\}$

Solucion:

- $a = d$
- $b = f$
- $c = e$

2 Ejercicio # 3

$$S \subset \mathbb{N}_{30} \times \mathbb{N}_{30} \times \mathbb{N}_{30}$$

$$\mathbb{N}_{30} := \{\langle 2, 2, 4 \rangle, \langle 2, 3, 6 \rangle, \langle 3, 3, 9 \rangle, \langle 2, 5, 10 \rangle, \langle 2, 7, 14 \rangle, \langle 3, 5, 15 \rangle, \langle 3, 7, 21 \rangle, \langle 2, 11, 22 \rangle, \langle 5, 5, 25 \rangle, \langle 2, 13, 26 \rangle\}$$

3 Ejercicio # 5

1. $f(x) = x^2$ Resp. Inyectiva
2. $g(x) = \frac{1}{\cos(x-1)}$ Resp. ninguna
3. $h(x) = 2x$ Resp. Biyectiva
4. $w(x) = x + 1$ Resp. suryectiva