

## Respuestas laboratorio 2 Cálculo dif. e int. I

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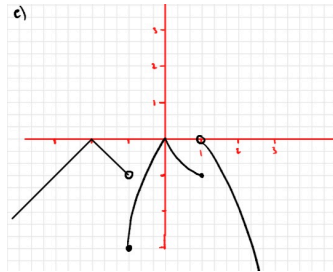
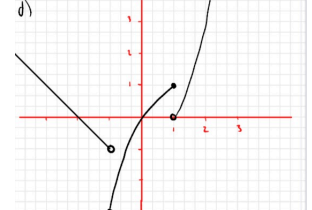
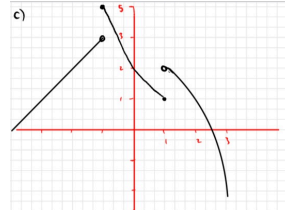
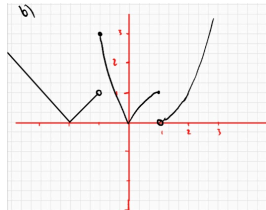
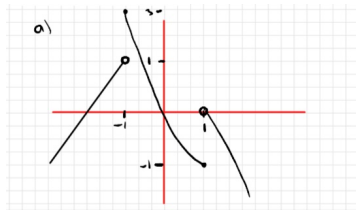
### Pregunta 1 (a):

- Dominio de  $f = \mathbb{R} \setminus \{-1\}$
- Imagen de  $f = \mathbb{R} \setminus \{1\}$
- Dominio de  $1/f = \mathbb{R} \setminus \{-1, 0\}$
- Imagen de  $1/f = \mathbb{R} \setminus \{1, 0\}$

### Pregunta 1 (b):

- $f(f(x))$ 
  - Dominio :  $\mathbb{R} \setminus \{-1, -1/2\}$
  - Regla :  $f(f(x)) = x/(2x+1)$
  
- $f(f(f(x)))$ 
  - Dominio :  $\mathbb{R} \setminus \{-1, -1/2, -1/3\}$
  - Regla:  $f(f(f(x))) = x/(3x+1)$
  
- $f(1/f(x))$ 
  - Dominio :  $\mathbb{R} \setminus \{-1, -1/2, 0\}$
  - Regla:  $f(1/f(x)) = (x+1)/(2x+1)$
  
- $f(1/(1+f(x)))$ 
  - Dominio:  $\mathbb{R} \setminus \{-1, -1/2, -2/3\}$
  - Regla:  $f(1/(1+f(x))) = (x+1)/(3x+2)$

**Pregunta 2:**



**Pregunta 3:**

- Dominio de  $h(x)$  :  $[-3, -\sqrt{5}] \cup [\sqrt{5}, 3]$

**Pregunta 4:**

- Dominio de  $g \circ g$ :  $\mathbb{R}$
- Regla:

$$g(g(x)) = \begin{cases} (1-x)^2 - 1, & x < 0 \\ 1 - (x^2 - 1), & 0 \leq x < 1 \\ (x^2 - 1)^2 - 1, & 1 \leq x \end{cases}$$

**Pregunta 5:**

- Dominio de  $f$ :  $\mathbb{R} \setminus \{1\}$
- $f(x) = (2x + 1) \setminus (1 - x)$

**Pregunta 6:**

$f(x) = 12 - [(1-x)\setminus(3)]^3$      $\circ$      $f(x) = (x^3 - 3x^2 + 3x + 323)/(27)$