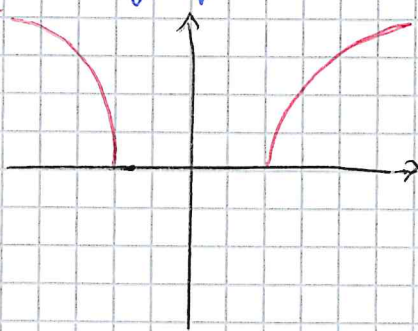


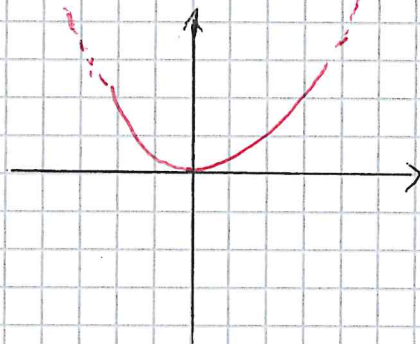
ESERCIZI (foglio 2)

Esercizio 1. Dire quali delle seguenti curve sono il grafico di una funzione da $\mathbb{R}$ a $\mathbb{R}$

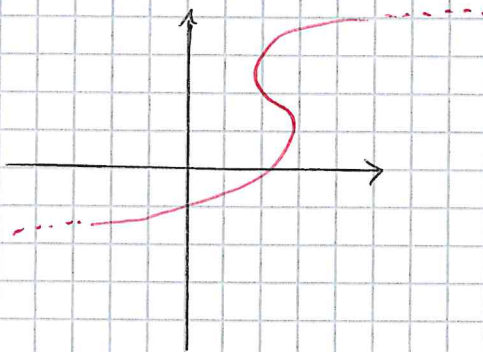
a)



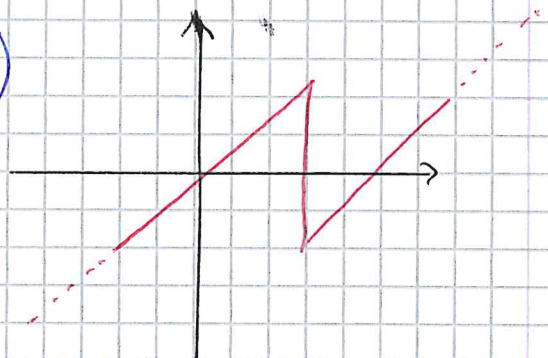
b)



c)



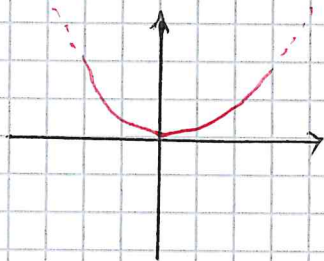
d)



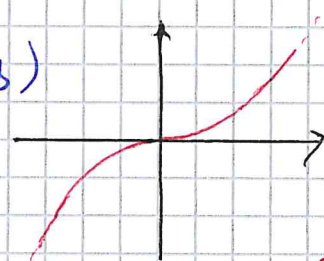
Esercizio 2

Dire se le seguenti funzioni da $\mathbb{R}$ a $\mathbb{R}$ sono iniettive e suriettive.

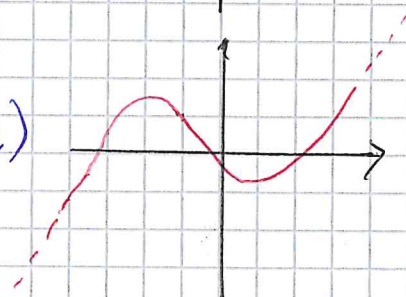
a)



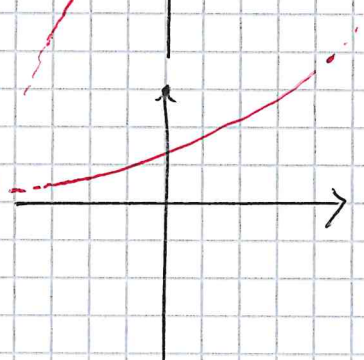
b)



c)



d)



Esercizio 3 Dire se le seguenti funzioni sono iniettive

a) $f: \mathbb{R} \rightarrow \mathbb{R} \quad f(x) = 2x + 1$

b) $g: \mathbb{R} \setminus \{2\} \rightarrow \mathbb{R} \quad g(x) = \frac{x+1}{x-2}$

c) $h: \mathbb{R} \rightarrow \mathbb{R} \quad h(x) = x^2 + 2$

d) $l: \mathbb{R} \rightarrow \mathbb{R} \quad l(x) = x^3 + 1$

Esercizio 4 Dire se le seguenti funzioni sono suriettive:

a) $f: \mathbb{R} \rightarrow \mathbb{R} \quad f(x) = -3x + \frac{1}{2}$

b) $g: \mathbb{R} \rightarrow \mathbb{R} \quad g(x) = x^3 + 2$

c) $h: \mathbb{R} \rightarrow \mathbb{R} \quad h(x) = (x+1)^2$

d) $l: \mathbb{R} \rightarrow [1; +\infty[\quad l(x) = x^2 + 1$

Esercizio 5 Dire se le seguenti funzioni sono invertibili e in caso affermativo determinare l'inversa.

a) $f: \mathbb{R} \rightarrow \mathbb{R} \quad f(x) = \frac{x}{2}$

b) $g: \mathbb{R} \rightarrow \mathbb{R} \quad g(x) = x^2 + \sqrt{x}$

c) $h: \mathbb{R} \setminus \{3\} \rightarrow \mathbb{R} \quad h(x) = \frac{x+1}{x-3}$

d) $l: \mathbb{R} \setminus \{3\} \rightarrow \mathbb{R} \setminus \{1\} \quad l(x) = \frac{x+1}{x-3}$