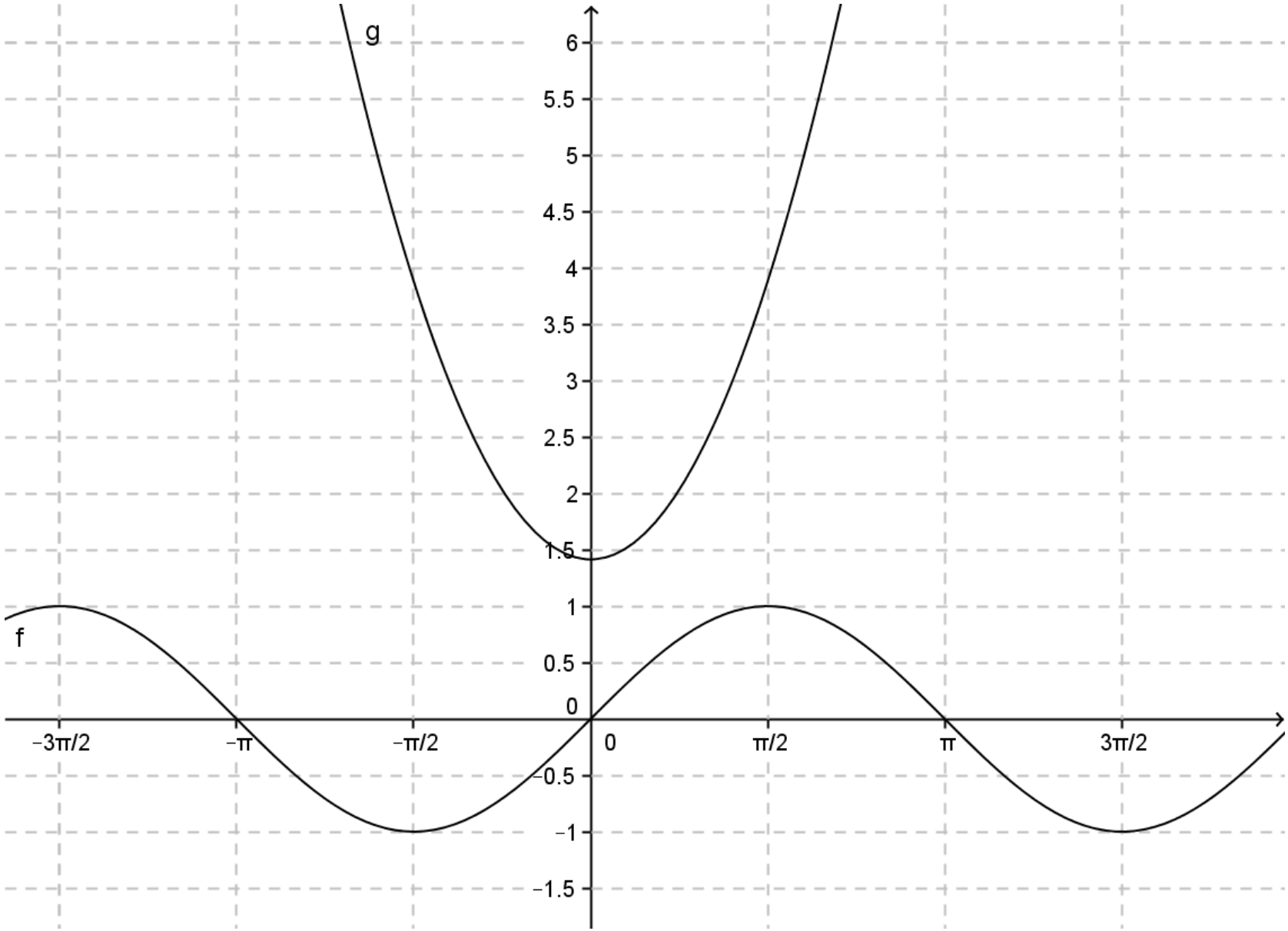
# Tutorato

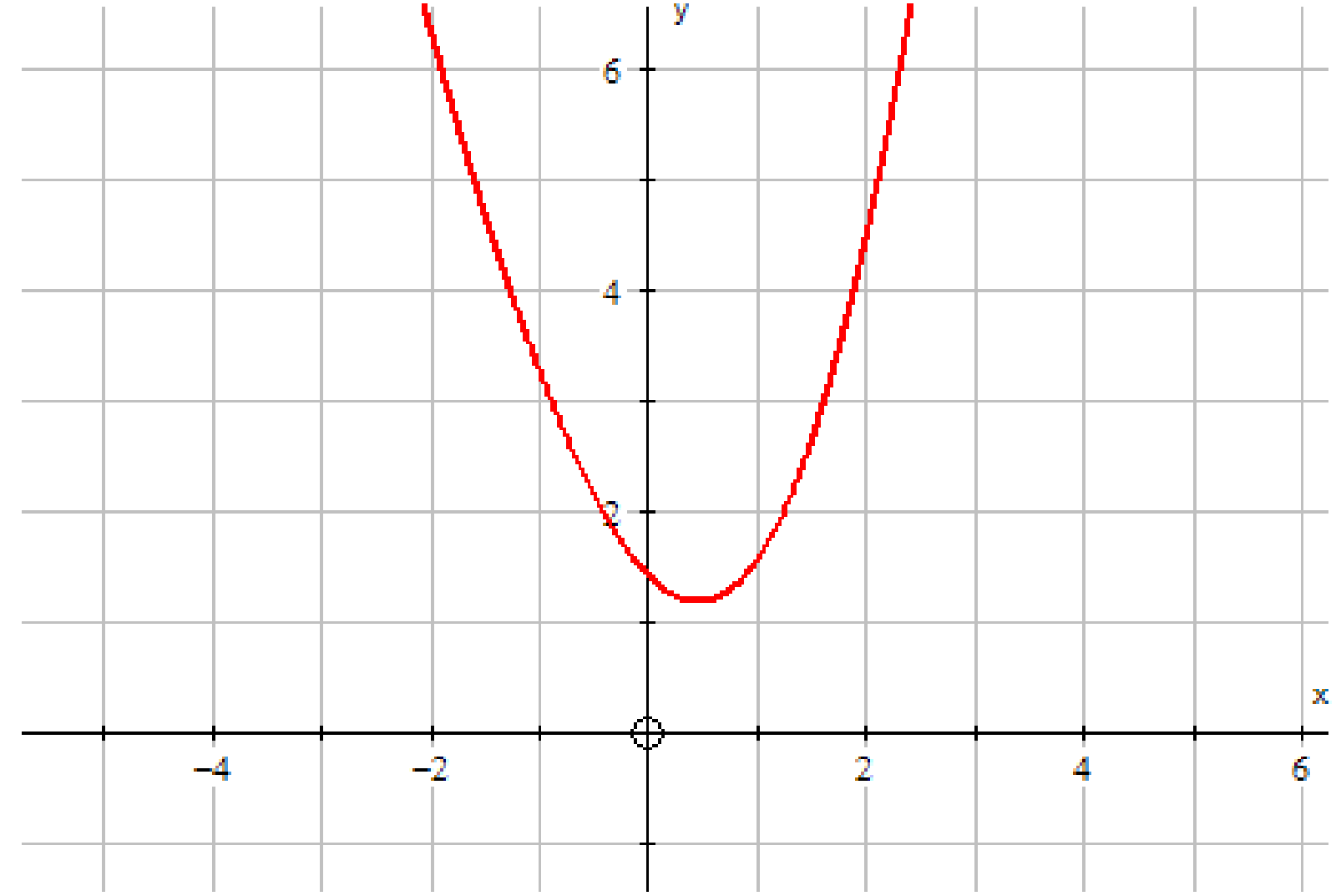
Considerate la funzione *f* definita su $\mathbb{R}$ da:

$$f(x) = -\sin x + x^2 + \sqrt{2}$$

È vero che per ogni $x \in \mathbb{R}$, $f(x) > 0$?

Spiegate la vostra risposta.





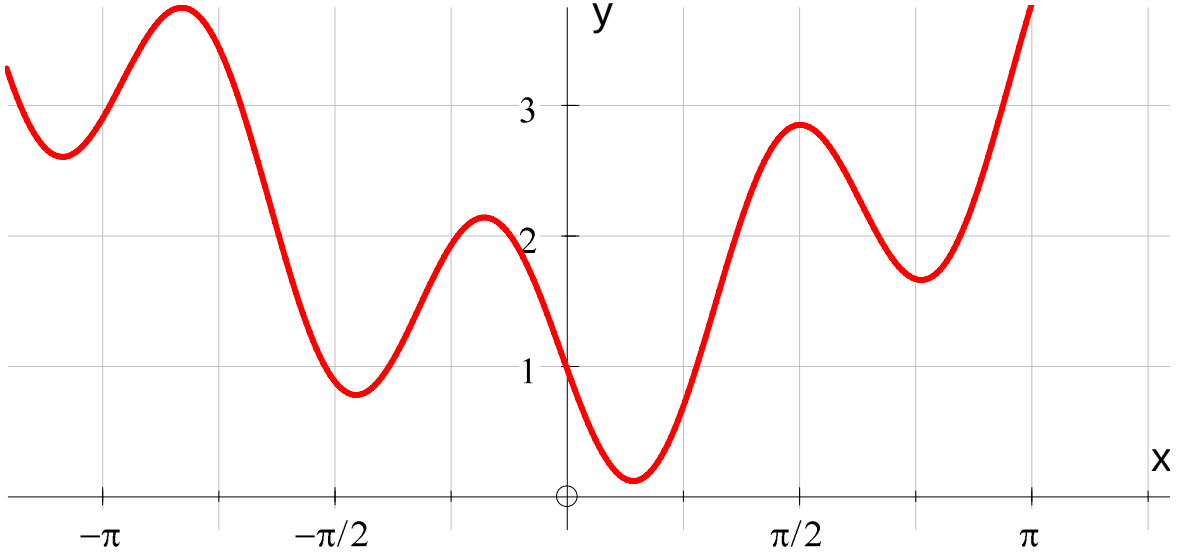

Equation 1: $y=-\sin x+x^2+\sqrt{2}$

Calcolate dominio e derivata prima di

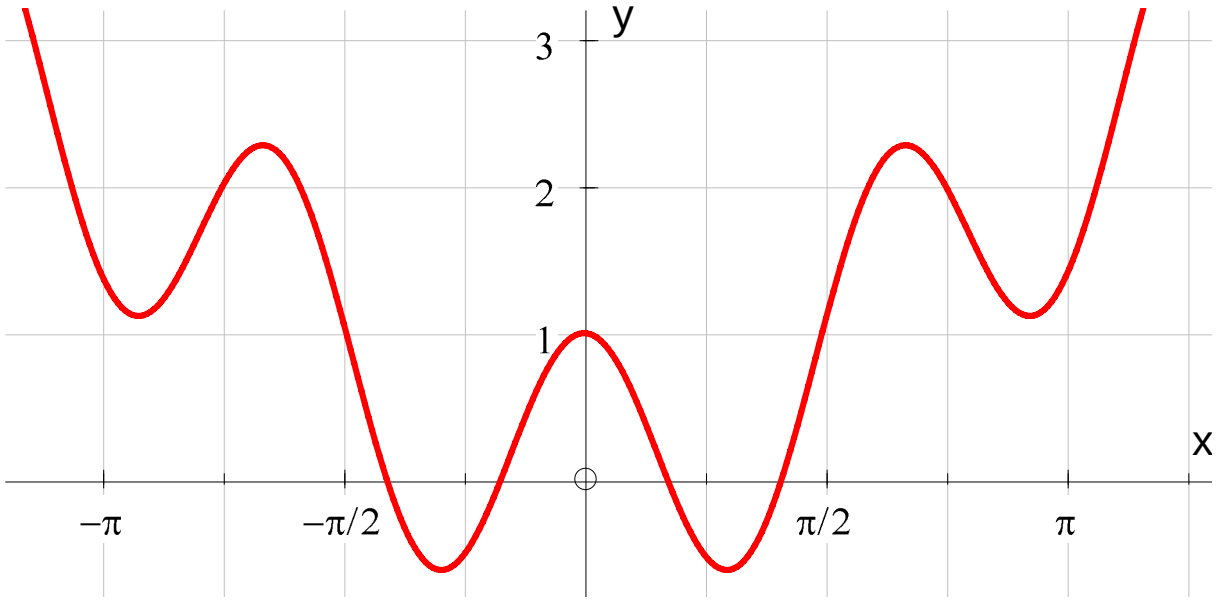
$$g(x) = \sqrt{5x^2 - 17x}$$

Calcolate dominio e derivata prima di

$$h(x) = \sin\Big(\pi x\Big) + \sqrt{1 + x^2}$$

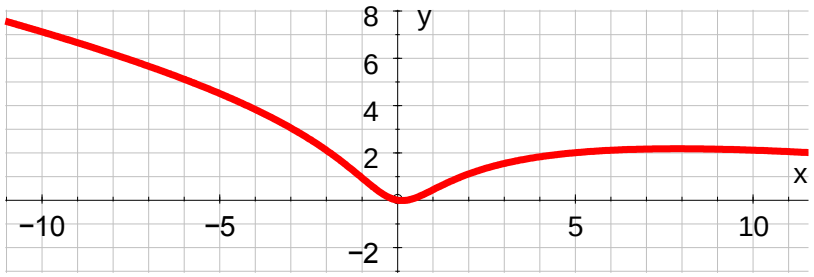



Il grafico accanto può rappresentare la derivata della funzione rappresentata sopra?

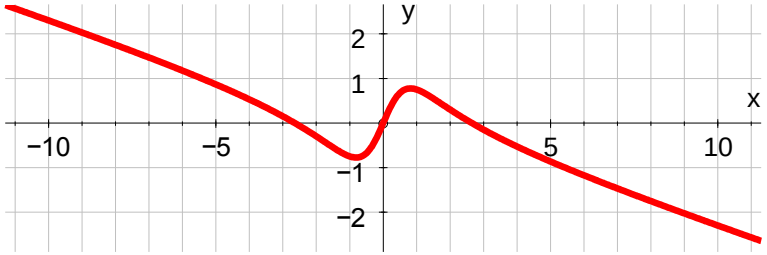


1) Tra i grafici A, B, C, D riportati sotto indicane tre che non corrispondono, nell'intervallo visualizzato, alla derivata della funzione *g* rappresentata a destra. Motiva.

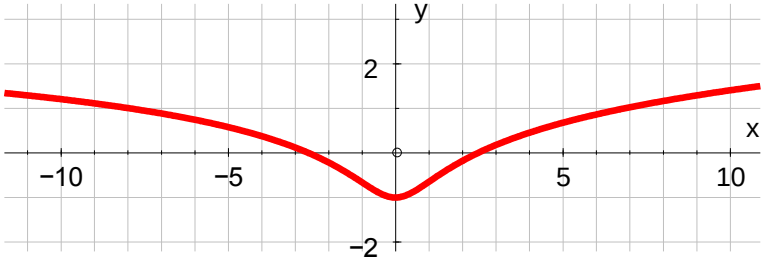
*g*



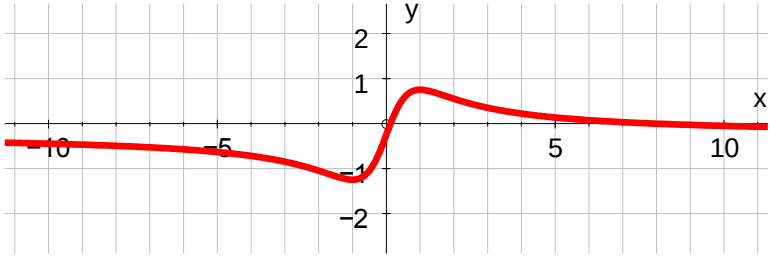

A)



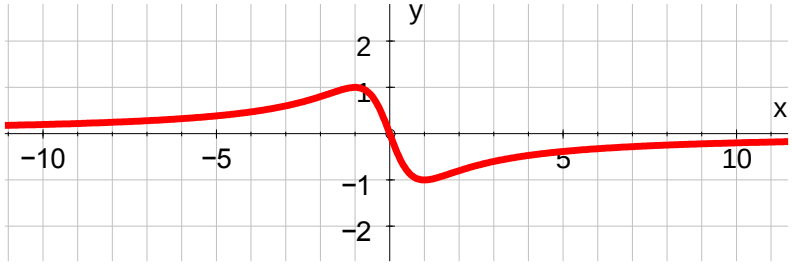

B)




C)




D)



Quali di queste funzioni sono dispari?
Quali pari?
Motiva la risposta

$$f(x) = |x|$$

$$f(x) = \frac{1}{x}$$

$$f(x) = x^3$$

$$f(x) = x^2 + 1$$