

$$\sqrt{3 + 2x - x^2} = 4^x + 2$$

RISOLUZIONE

GRAFICA

$$\begin{cases} y = \sqrt{3 + 2x - x^2} \\ y = 4^x + 2 \end{cases}$$

$$y = \sqrt{3 + 2x - x^2}$$

$$\Downarrow$$

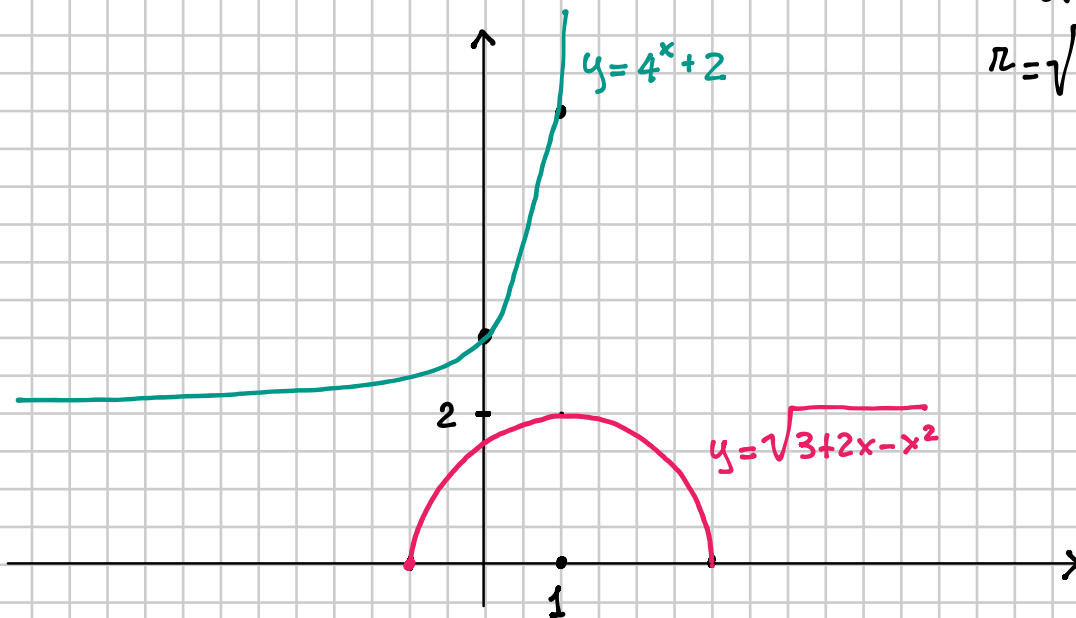
$$\begin{cases} y^2 = 3 + 2x - x^2 \\ y \geq 0 \end{cases}$$

$$\begin{cases} x^2 + y^2 - 2x - 3 = 0 & \text{SEMICIRCONFERENZA} \\ y \geq 0 \end{cases}$$

CENTRO  $C(1, 0)$ 

RAGGIO

$$R = \sqrt{1^2 + 0^2 + 3} = 2$$



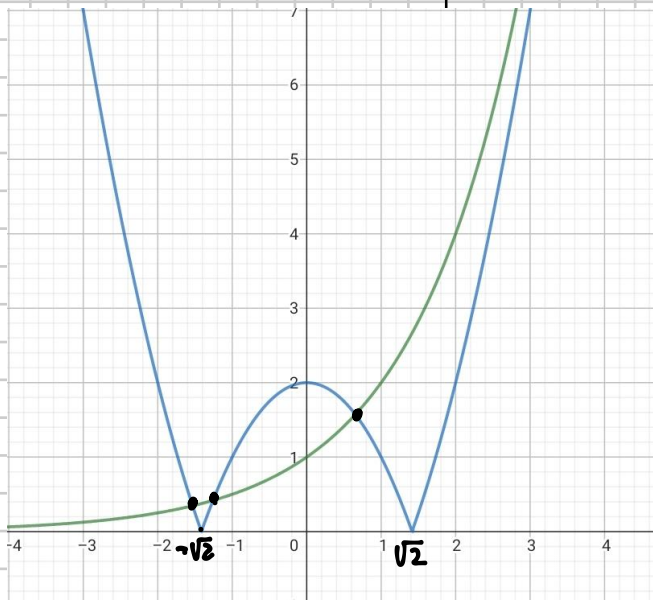
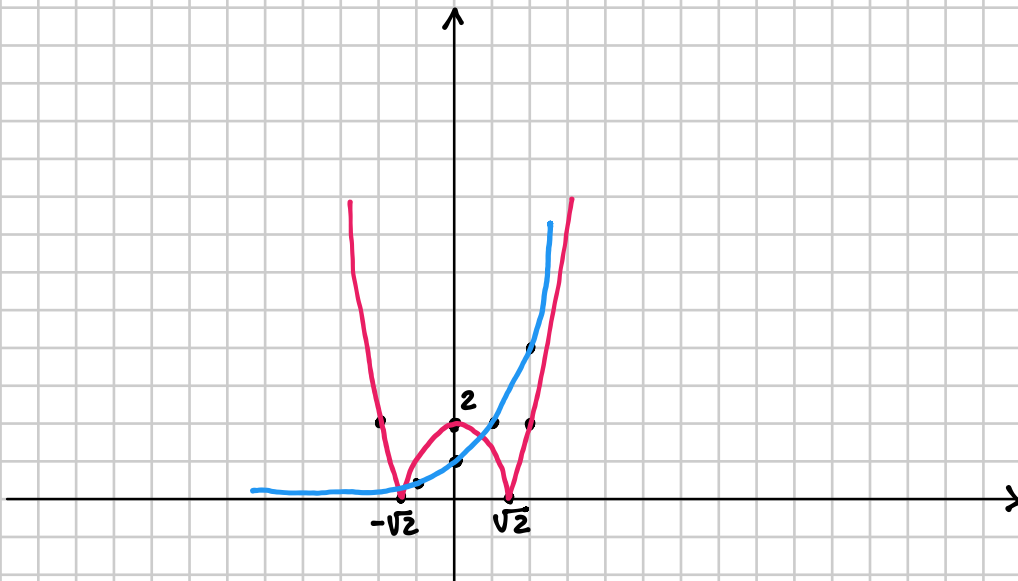
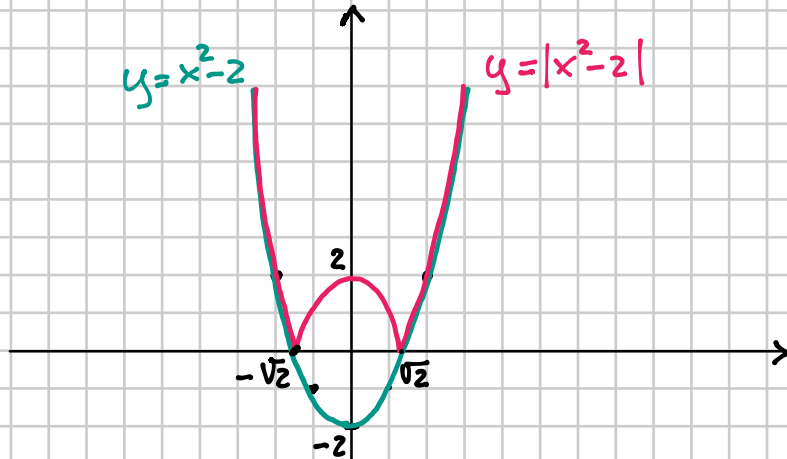
NON SI INTERSECANO

$$\Downarrow$$
EQ. IMPOSSIBILE

$$2^x = |x^2 - 2|$$

RISOLUZIONE GRAFICA

$$\begin{cases} y = 2^x \\ y = |x^2 - 2| \end{cases}$$



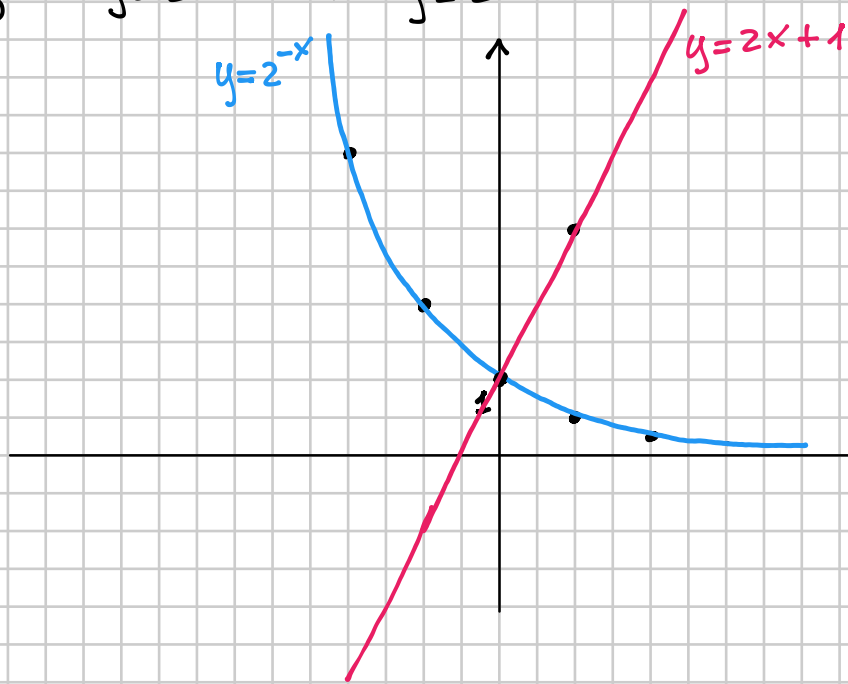
3 INTERSEZIONI

 $\Downarrow$ 
3 SOLUZIONI  $x_1, x_2, x_3$ 

$$-2 < x_1 < -\sqrt{2}$$

$$-\sqrt{2} < x_2 < -1$$

$$0 < x_3 < 1$$

Disegna  $y = 2^{-x}$ e  $y = 2x + 1$ 

Per quali  $x$   
 $2^{-x} > 2x + 1$ ?  
Cioè, in quali  
intervalli  $2^{-x}$   
"sta sopra"  $2x + 1$ ?

RISPOSTA:  $x < 0$