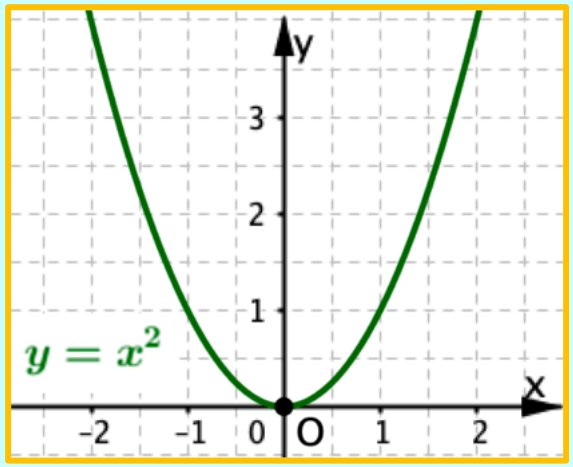
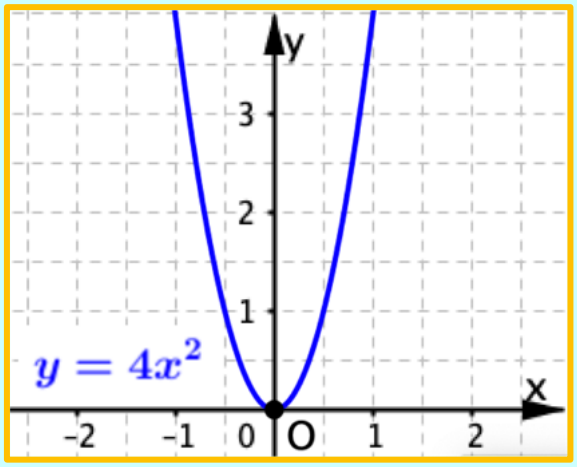
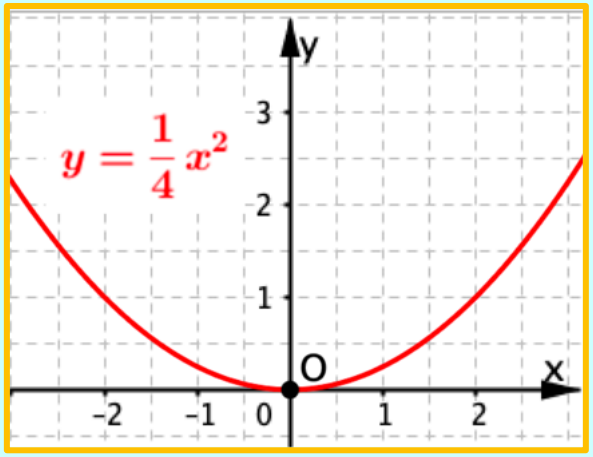
Grafici di parabole con vertice in O

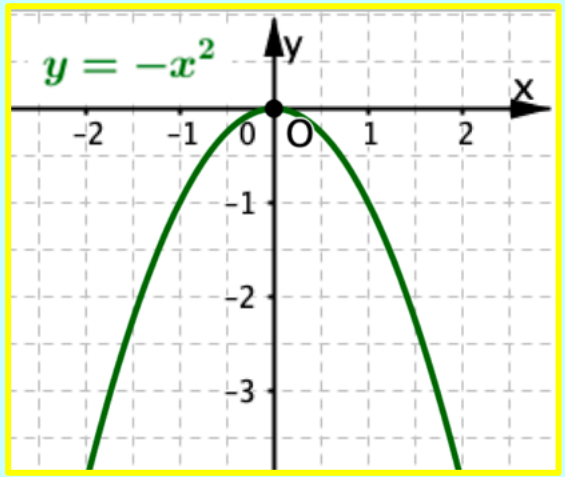
Bruna Cavallaro, 2024

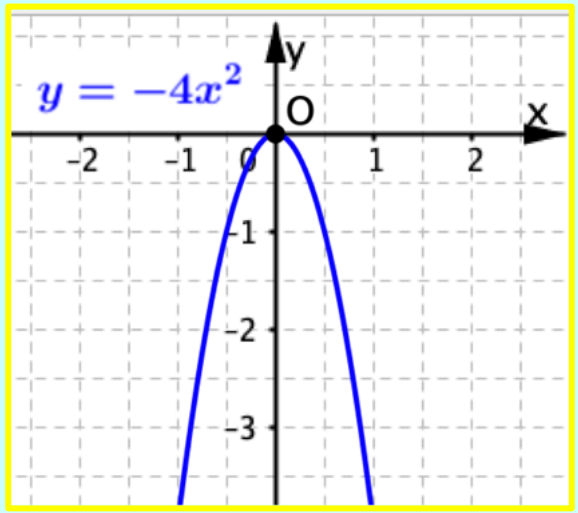
Grafici di funzioni del tipo $y = ax^2$

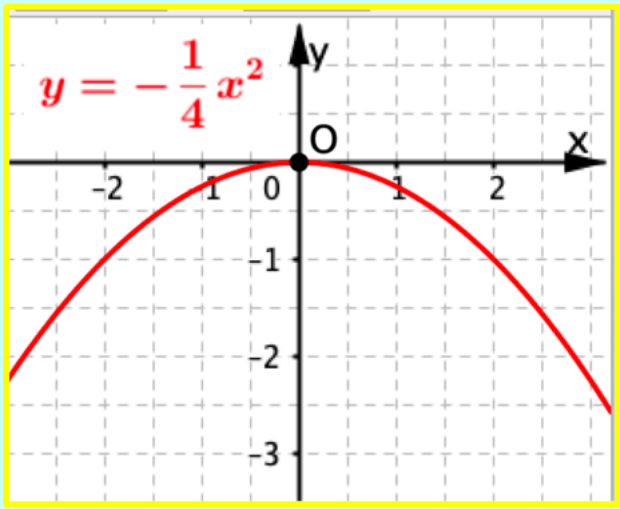






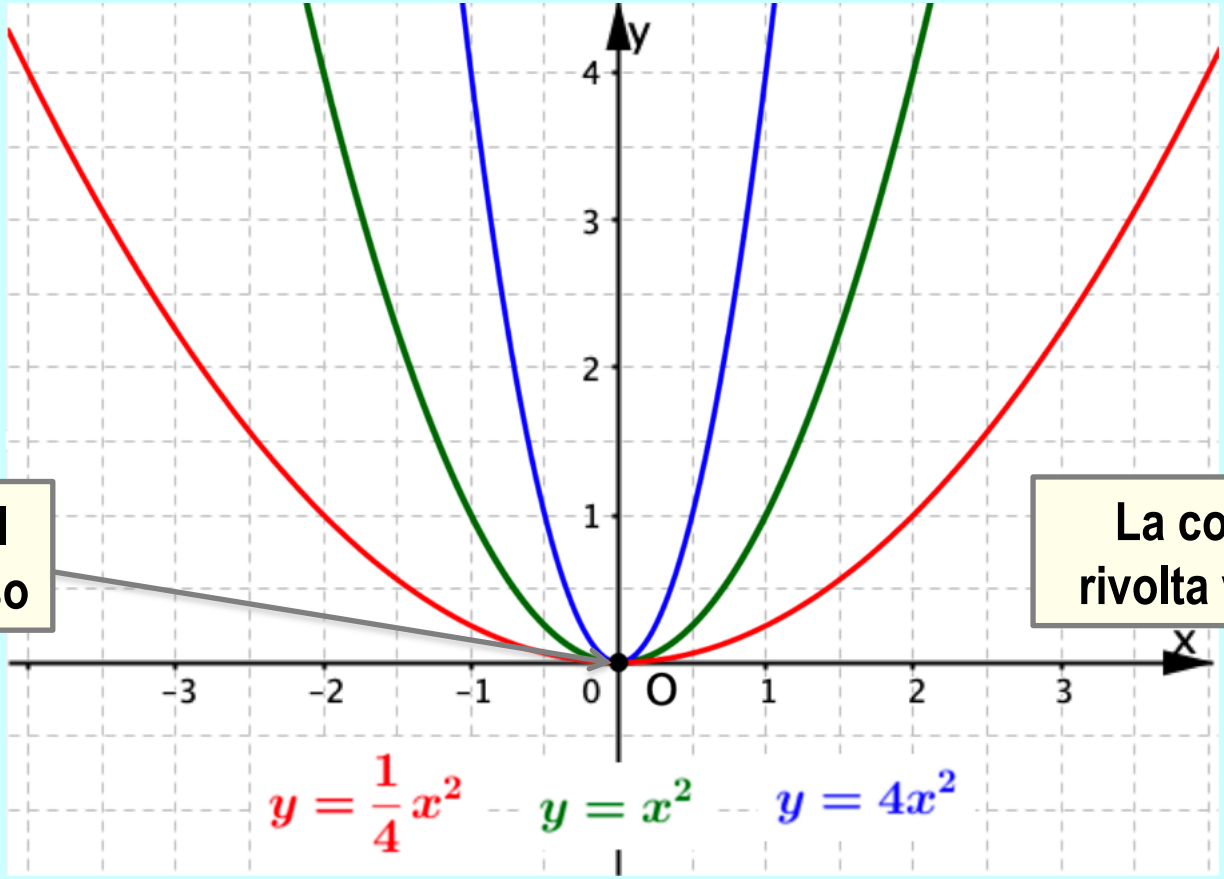






Le curve ottenute sono tutte parabole con equazione $y = ax^2$

Grafici di $y = ax^2$ con a positivo



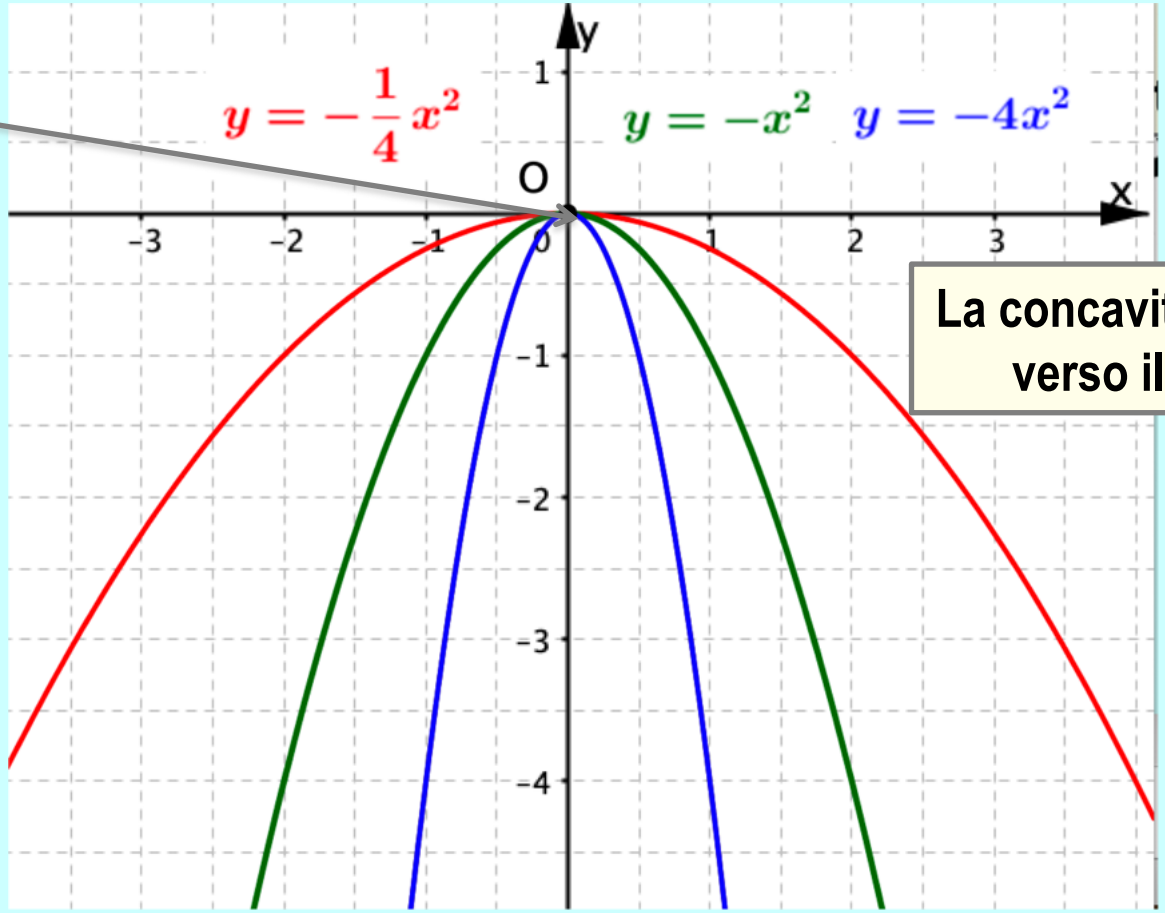
Il vertice O è il punto più basso

La concavità è rivolta verso l'alto



Grafici di $y = ax^2$ con a negativo

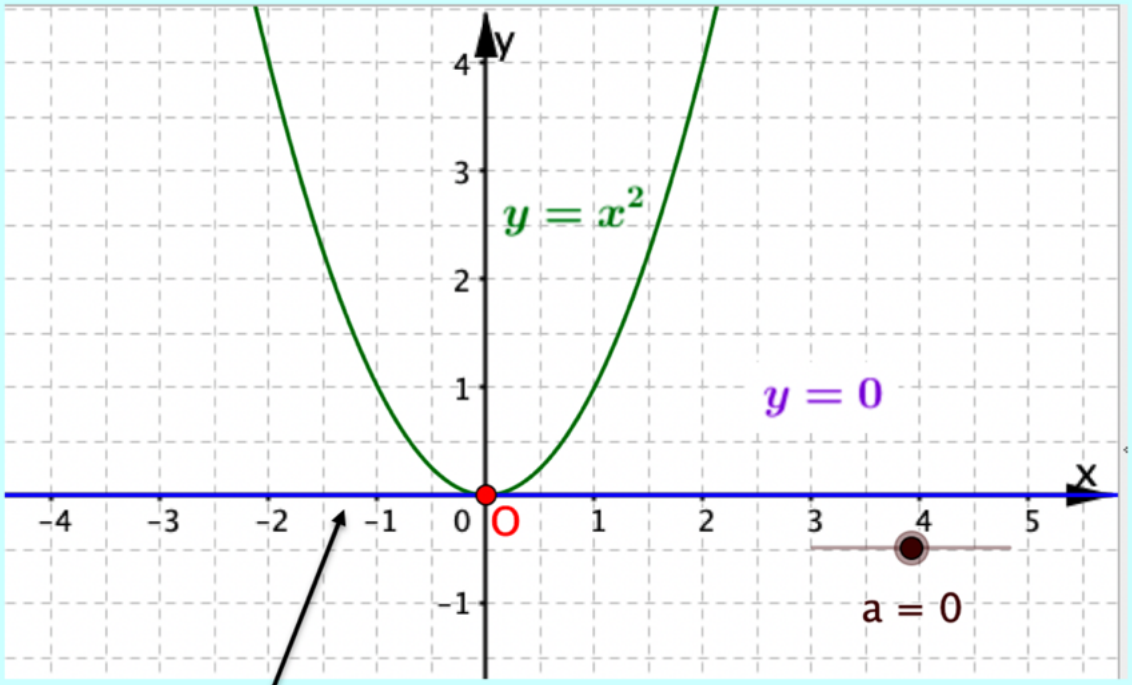
Il vertice O è il punto più alto



La concavità è rivolta verso il basso



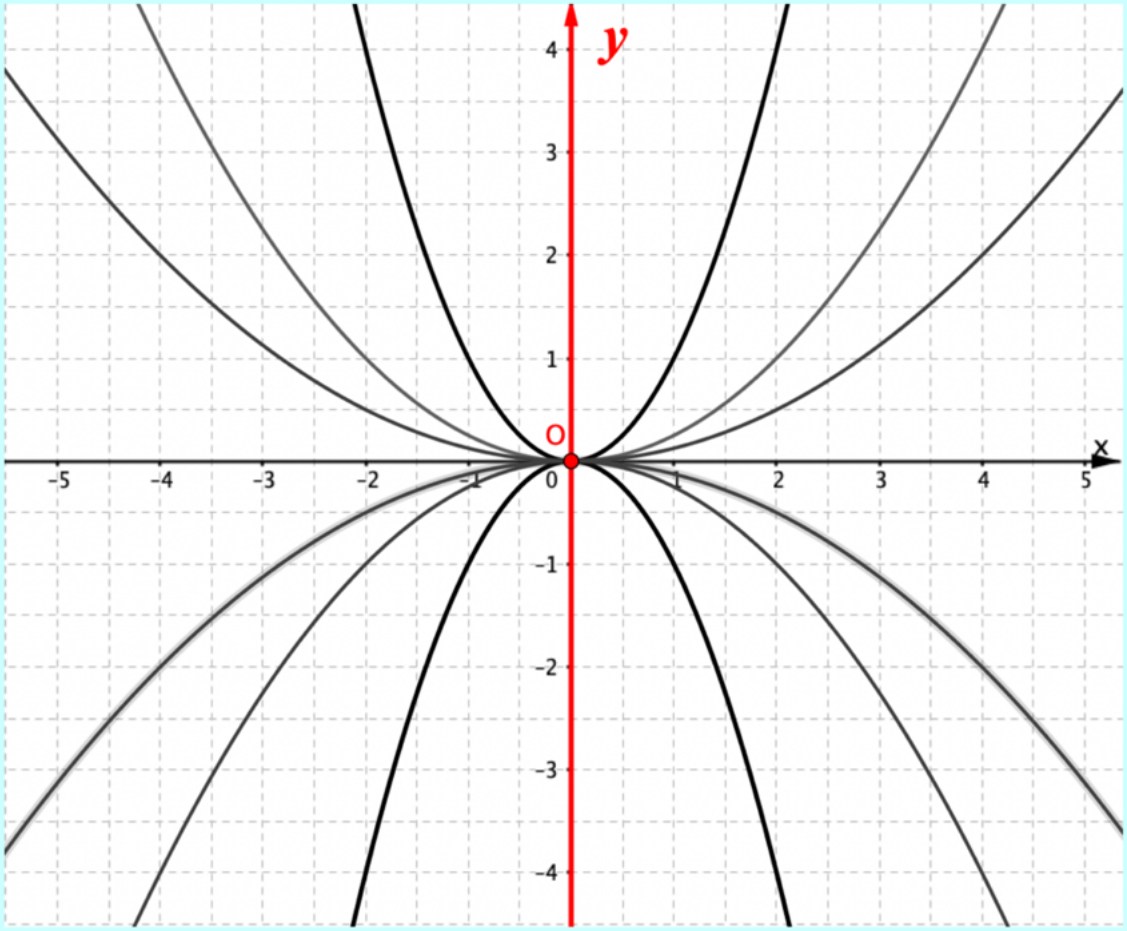
Grafico di $y = ax^2$ con a = 0



- **Funzione $y = 0x^2 \longleftrightarrow y = 0$**
- **Il grafico coincide con l'asse delle x**

Che cosa rimane fisso in tutte le parabole?

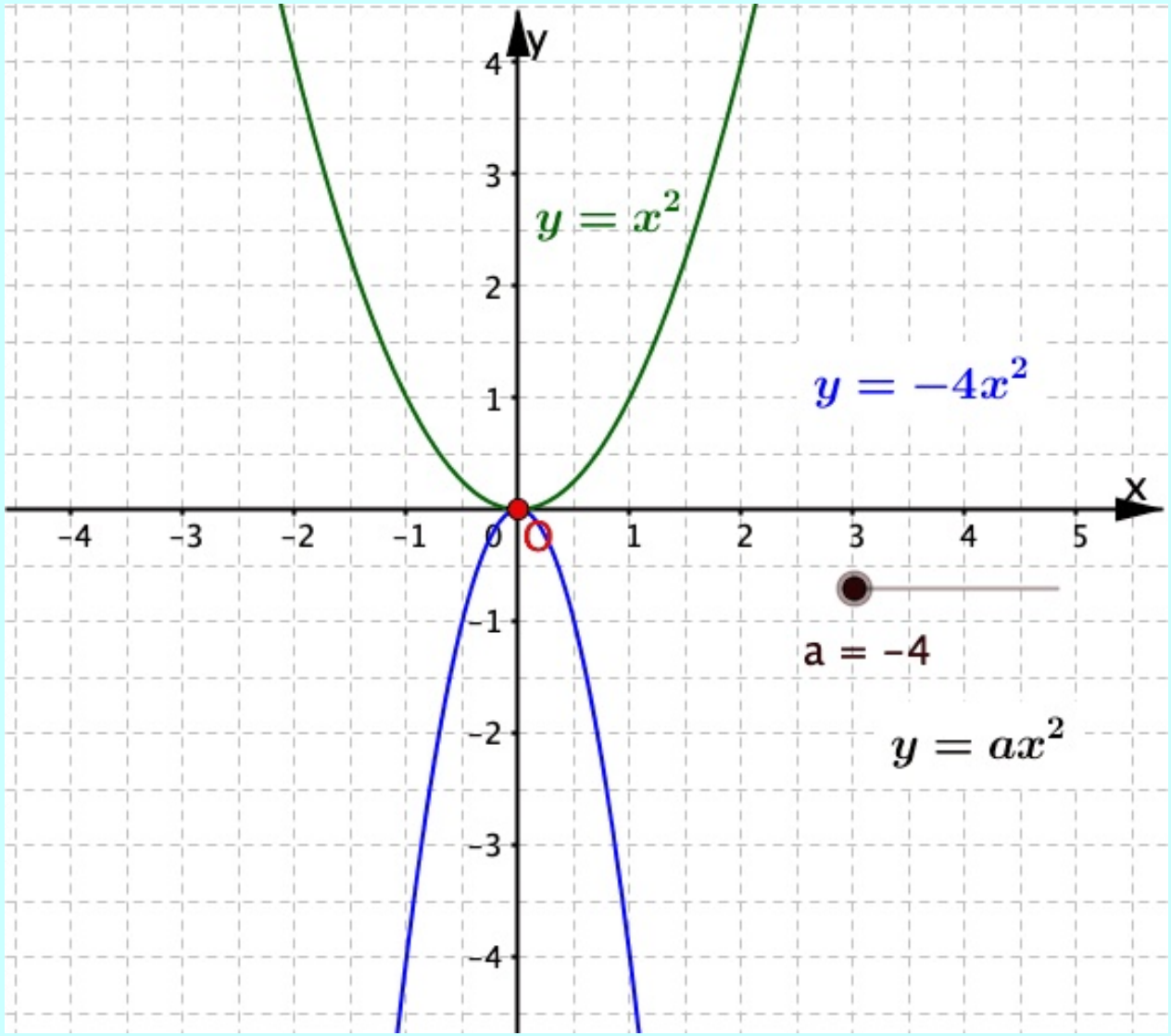
L'asse delle *y*
Asse di simmetria



O(0, 0)
Vertice

Tutte grafici di funzioni del tipo $y = ax^2$

Osservare parabole in movimento



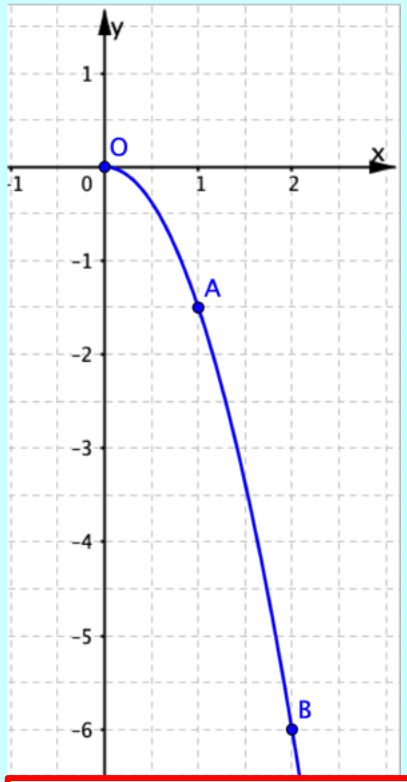
Come disegnare parabole con carta e penna

ESEMPIO

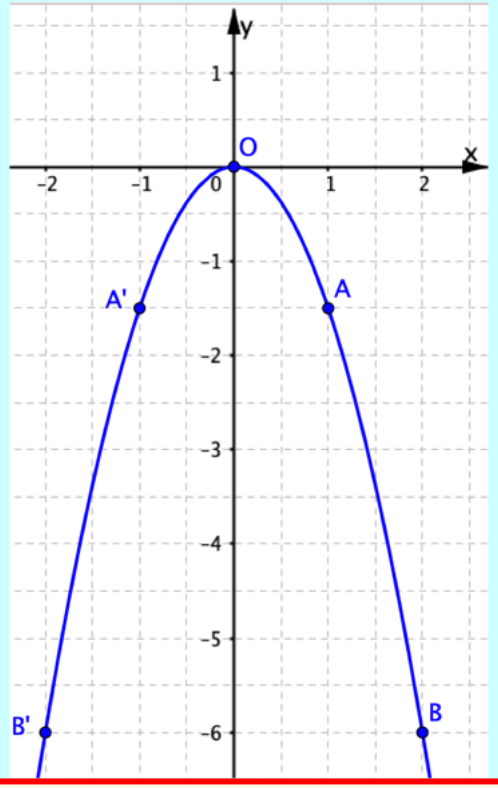
$$y = -\frac{3}{2}x^2$$

x	$y = -\frac{3}{2}x^2$	Punti
0	$y = -\frac{3}{2}\cdot 0^2 = 0$	**Vertice** **O** $(0,0)$
1	$y = -\frac{3}{2}\cdot 1^2 = -\frac{3}{2}$	**A** $\left(1, -\frac{3}{2}\right)$
2	$y = -\frac{3}{2}\cdot 2^2 = -6$	**B** $(2, -6)$

Trovo due punti A e B della curva a destra dell'asse di simmetria



Disegno l'arco OAB



Disegno l'arco OA'B' simmetrico dii OAB rispetto all'asse y