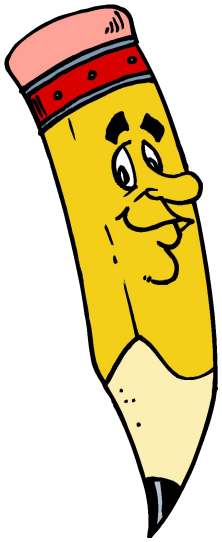


Функция $y = x^3$
График функции.

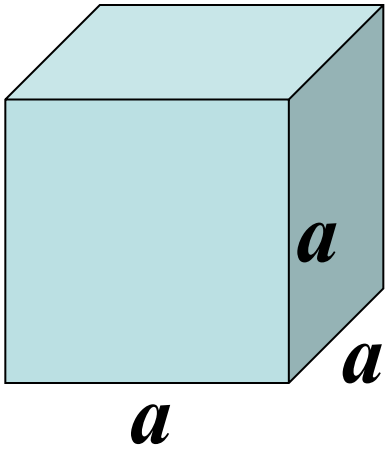
7 класс.

Каратанова Марина Николаевна,
МОУ СОШ №256, г.Фокино.

Примеры, приводящие к понятию функции

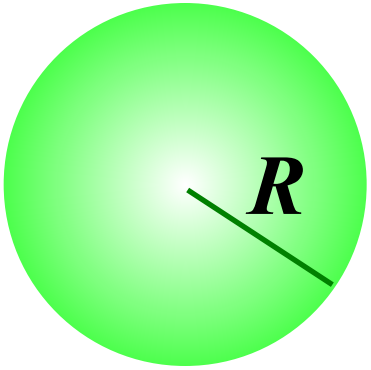
$$\acute{o} = \tilde{o}^3$$

1.



$V = a^3$

2.



$V = \frac{4}{3}\pi R^3$

зависимая *независимая*

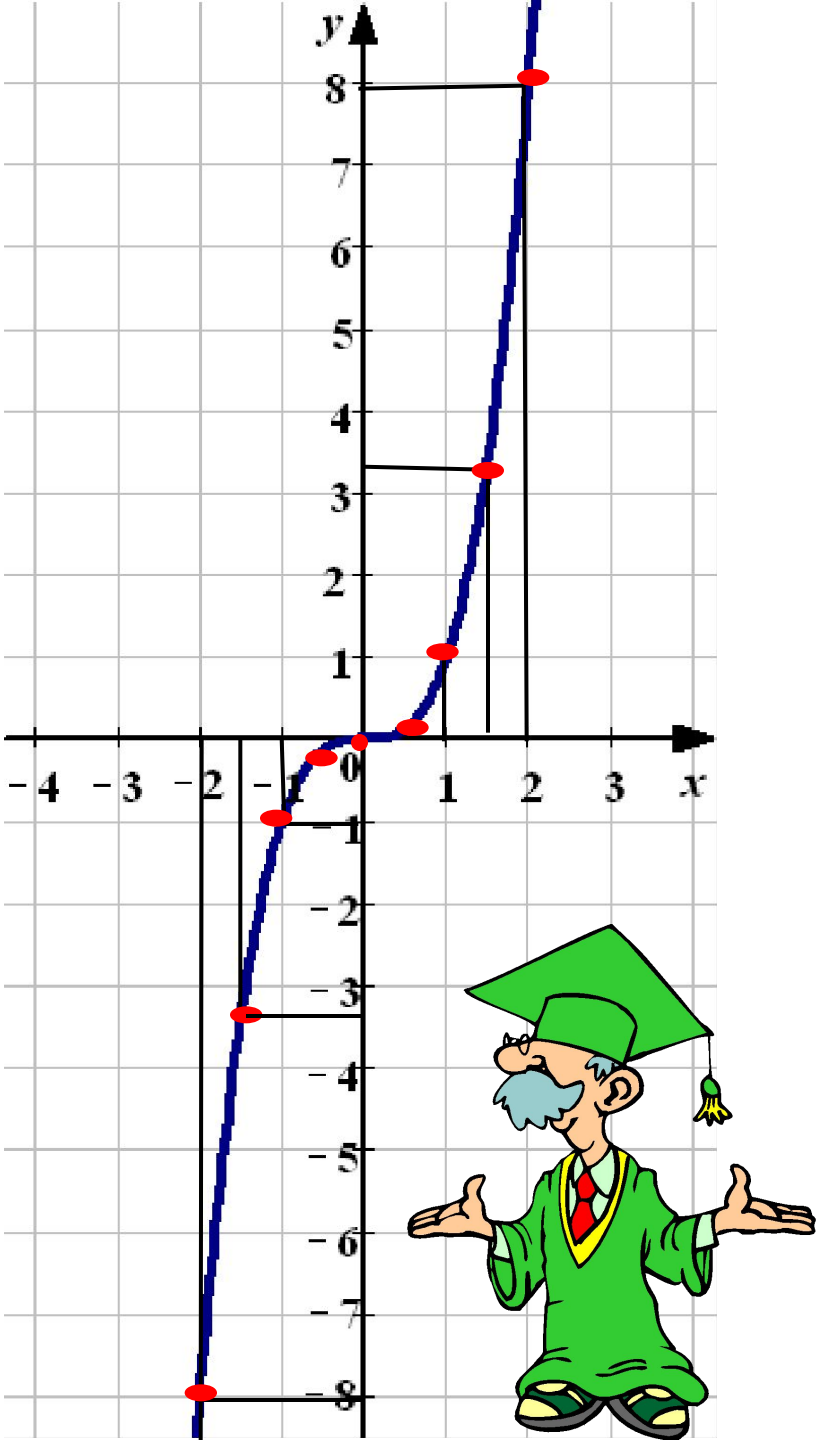
График функции $y = x^3$

Построим график функции по точкам:

x	-2	$-1,5$	-1	$-0,5$	0
y	-8	$-3,38$	-1	$0,13$	0

x	0	$0,5$	1	$1,5$	2
y	0	$0,13$	1	$3,38$	8

x	y
-2	-8
-1,5	-3,38
-1	-1
-0,5	-0,13
0	0
0,5	0,13
1	1
1,5	3,38
2	8

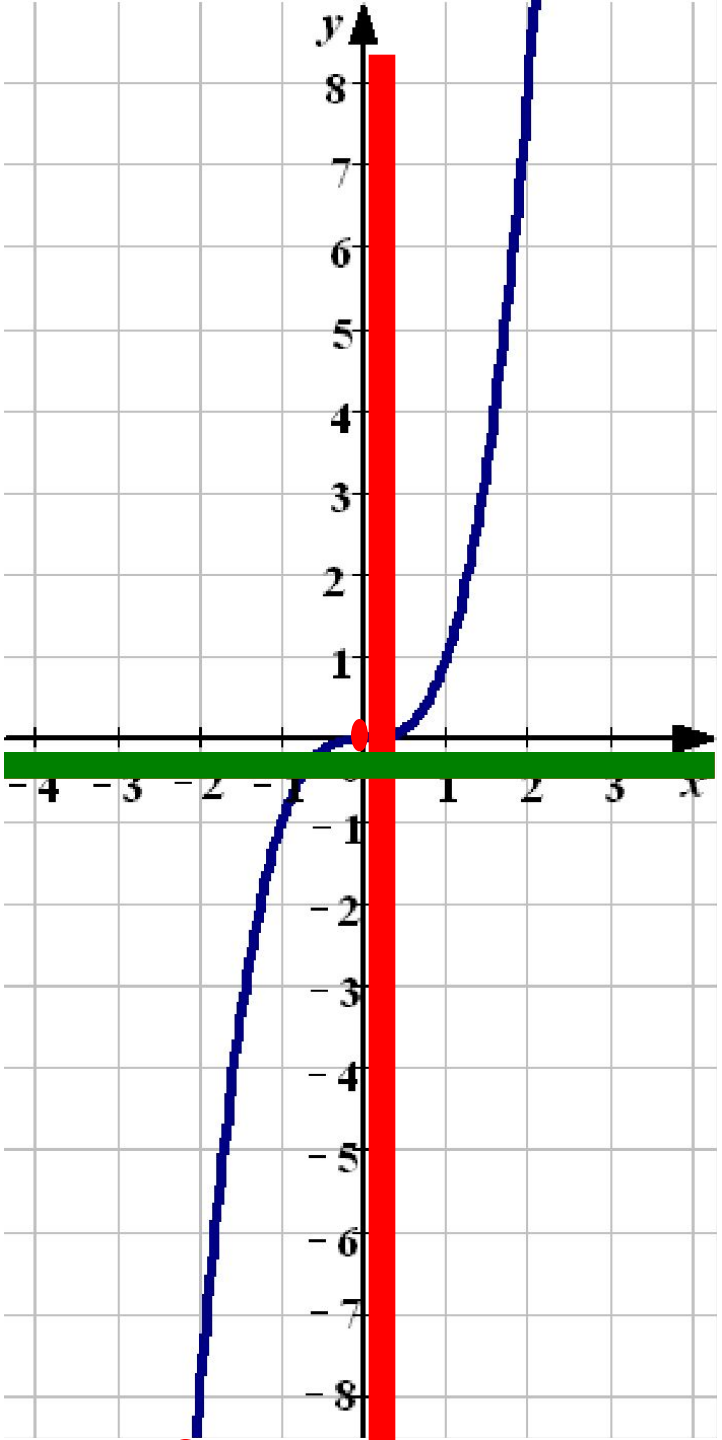


$$\tilde{o} = 0; \quad \acute{o} = 0$$

$$D_y = (-\infty; +\infty)$$

$$E_y = (-\infty; +\infty)$$

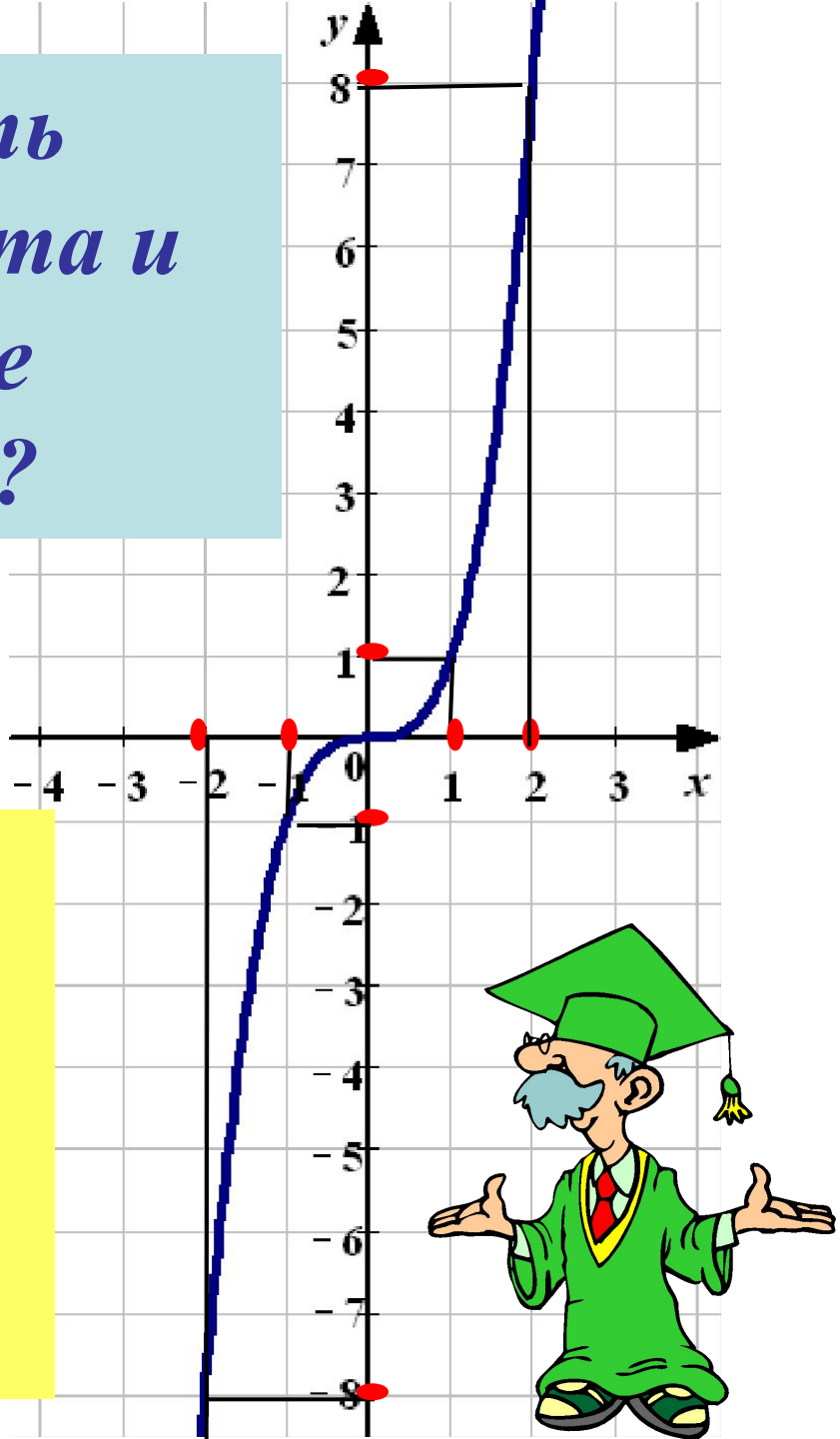
$$\hat{A}\hat{i}\c{c}\eth\grave{a}\tilde{n}\grave{o}\grave{a}\mathring{a}\grave{o} \quad (-\infty; +\infty)$$



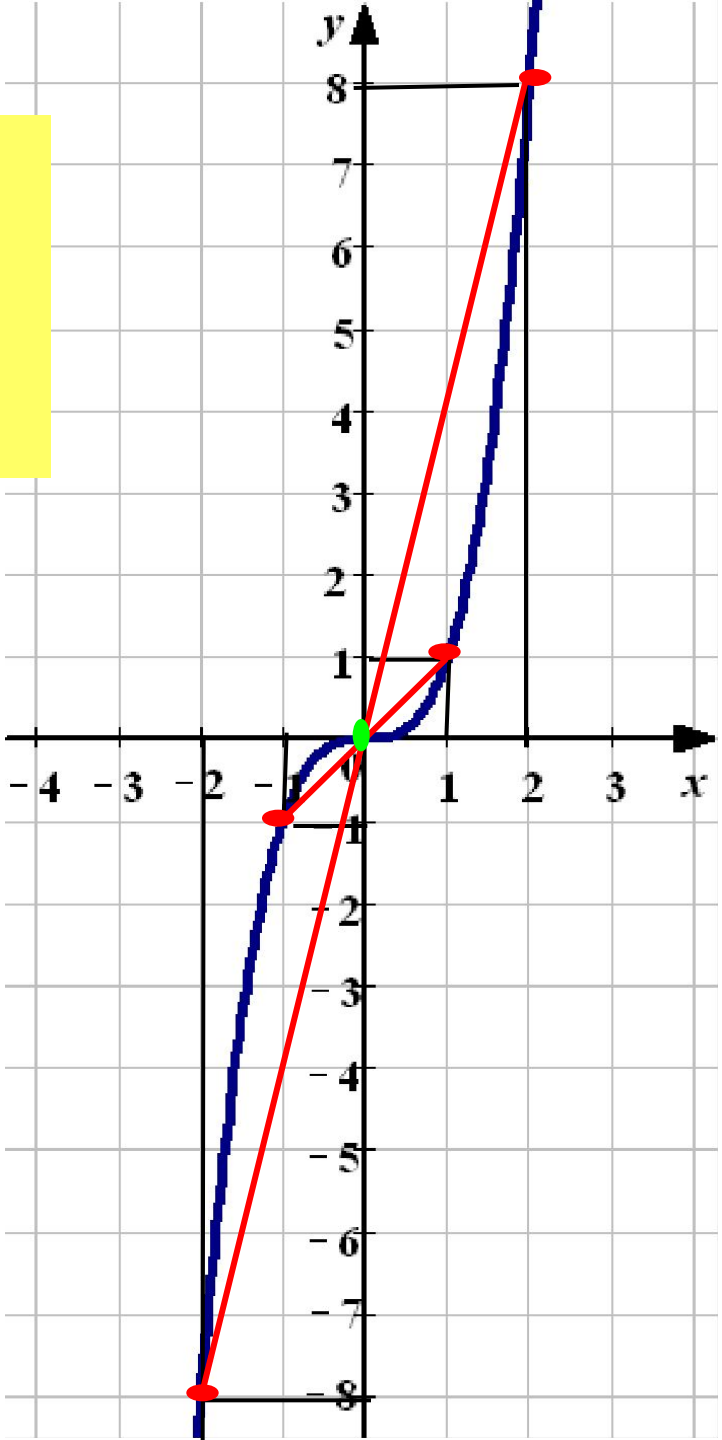
Что можно сказать про значения аргумента и соответствующие значения функций?

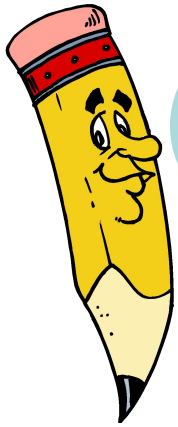
Противоположные числа.

Противоположным значениям x соответствуют противоположные значения y.



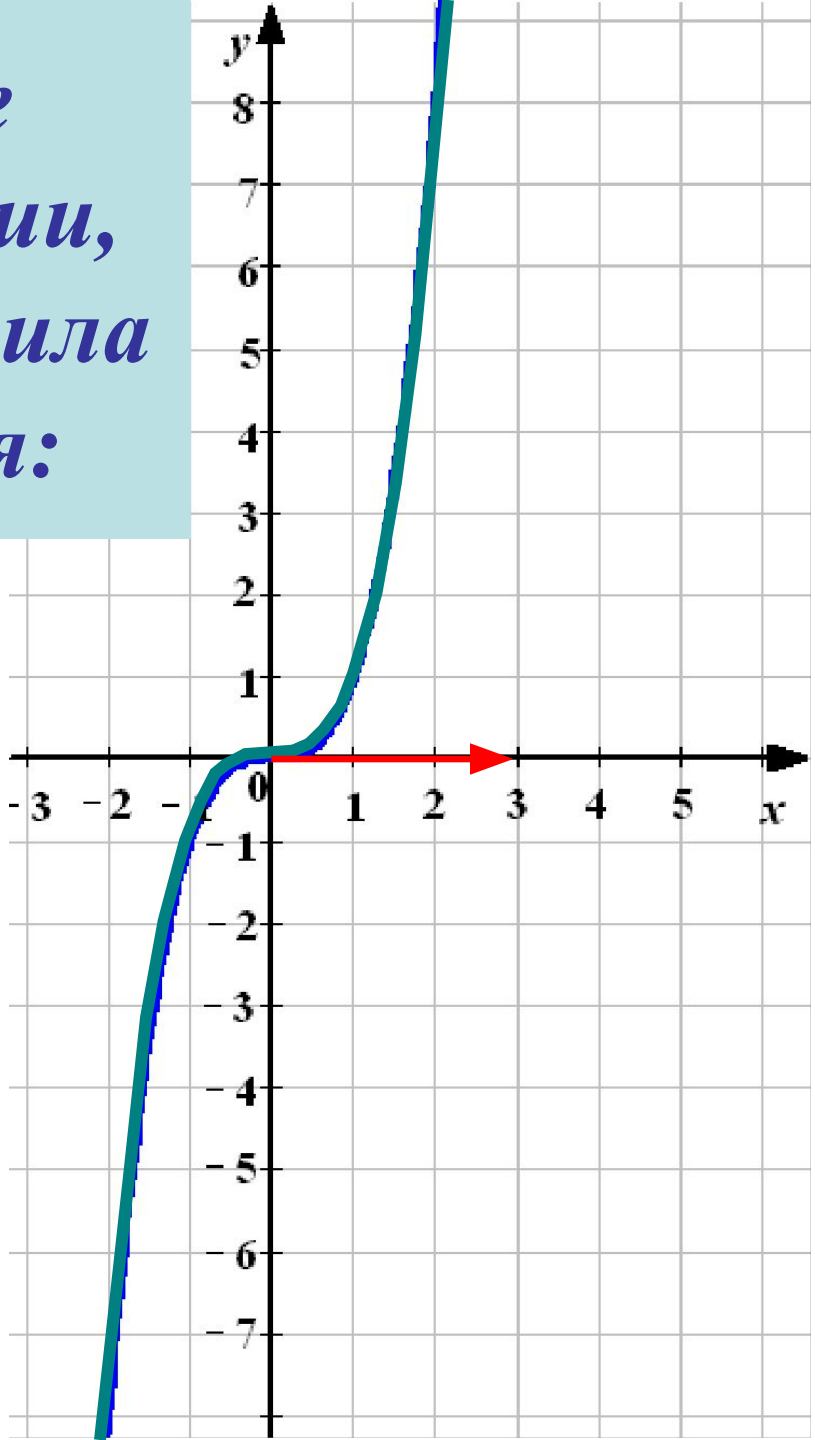
Симметрично относительно начала координат.

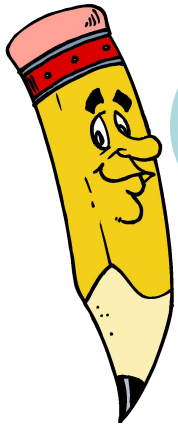




1. ***Постройте график функции, используя правила перемещения:***

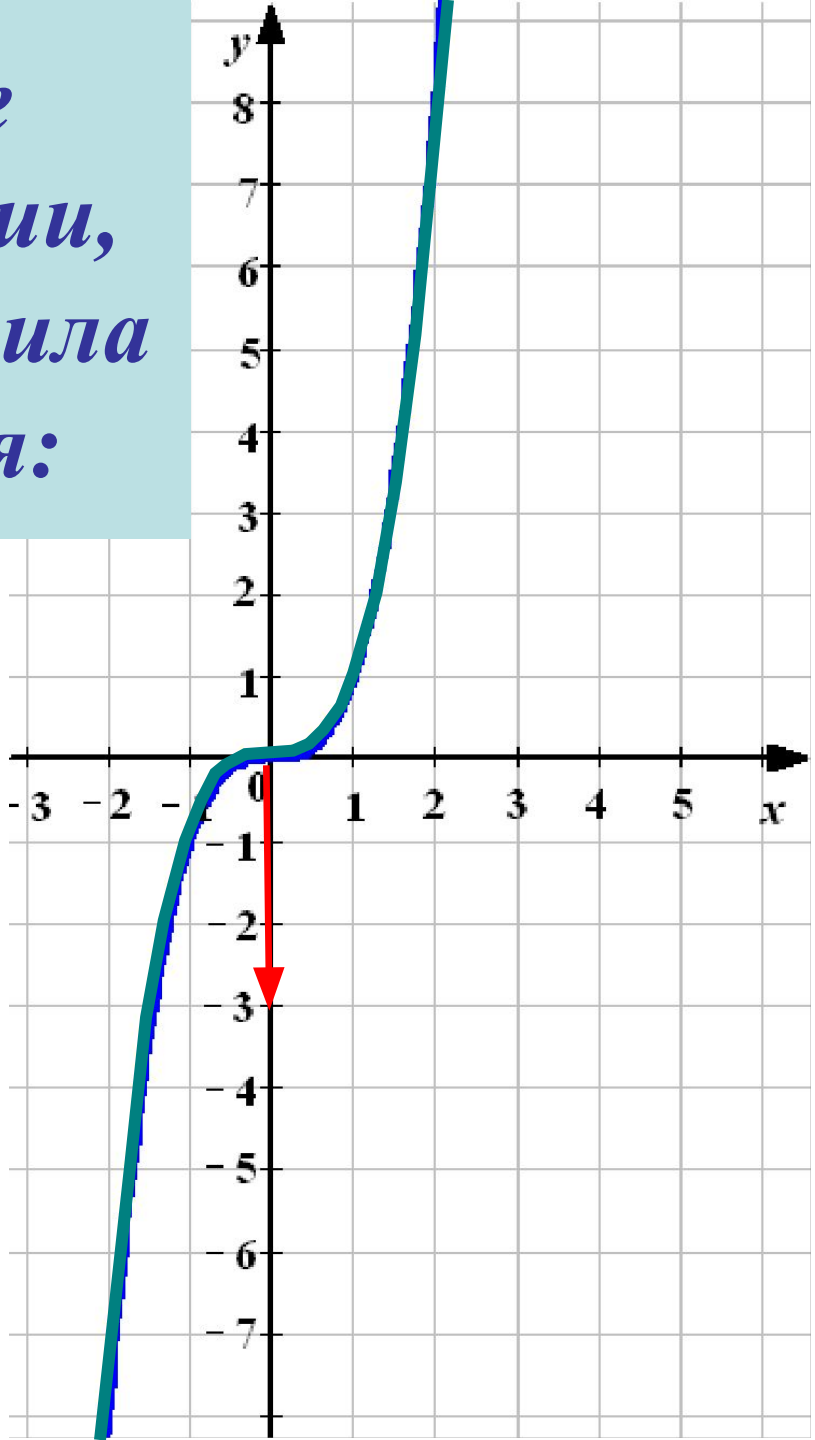
$$ó = (õ - 3)^3$$

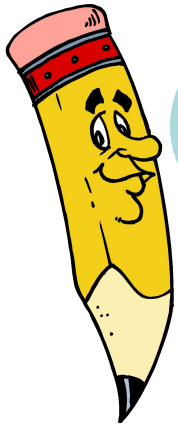




2. ***Постройте график функции, используя правила перемещения:***

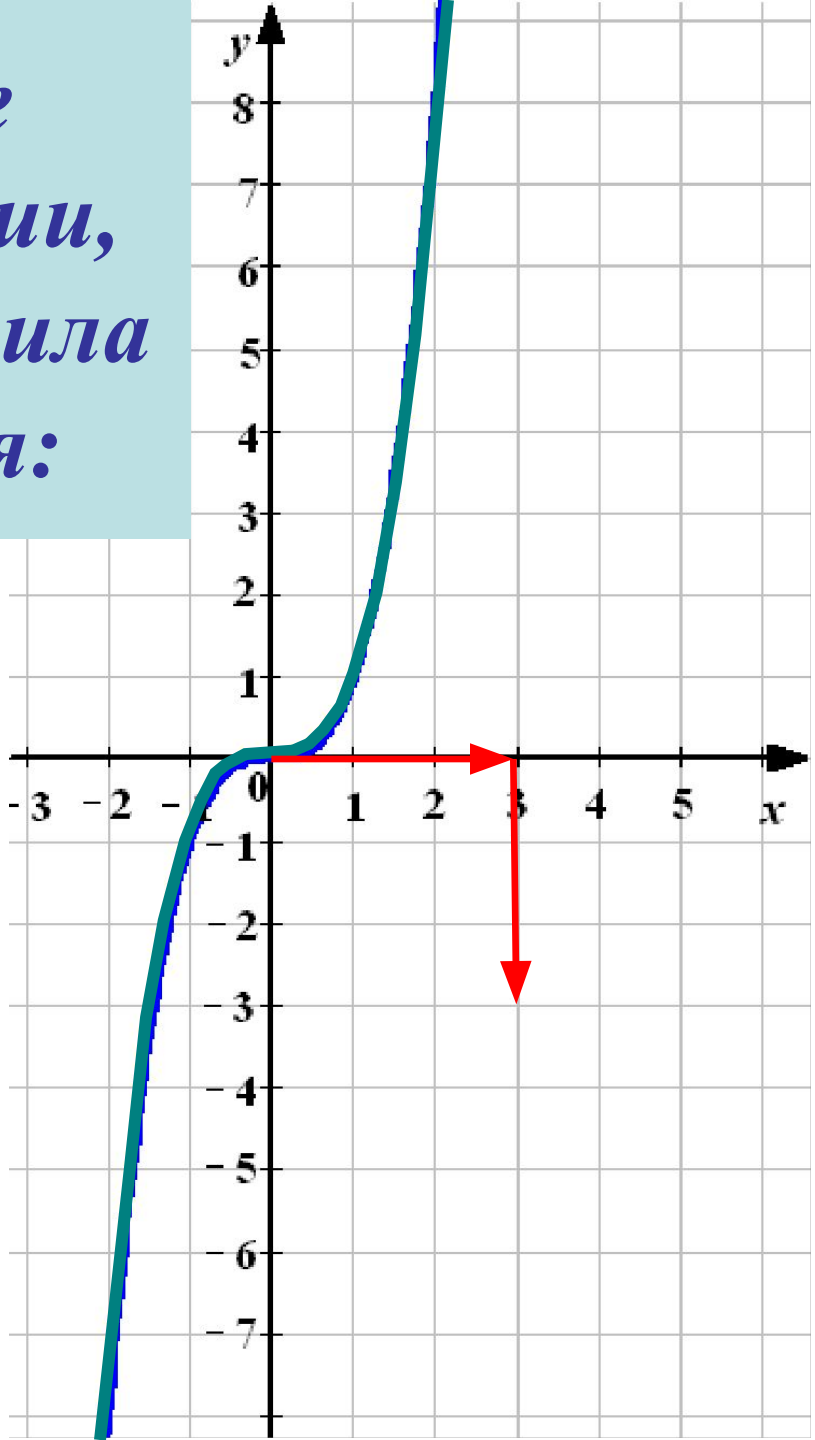
$$\acute{o} = \tilde{o}^3 - 3$$

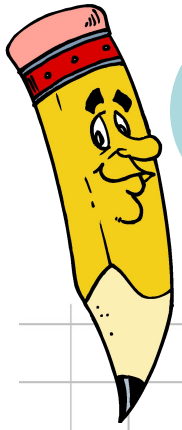




3. ***Постройте график функции, используя правила перемещения:***

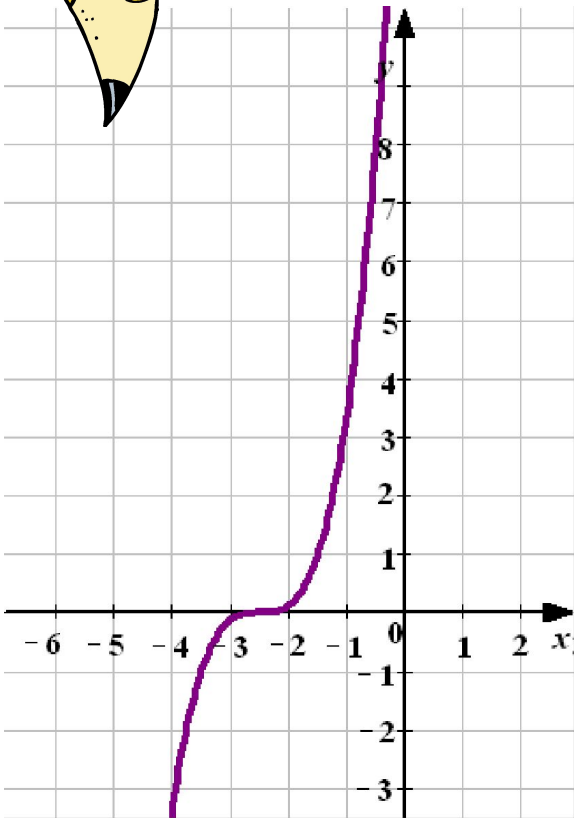
$$ó = (\tilde{o} - 3)^3 - 3$$





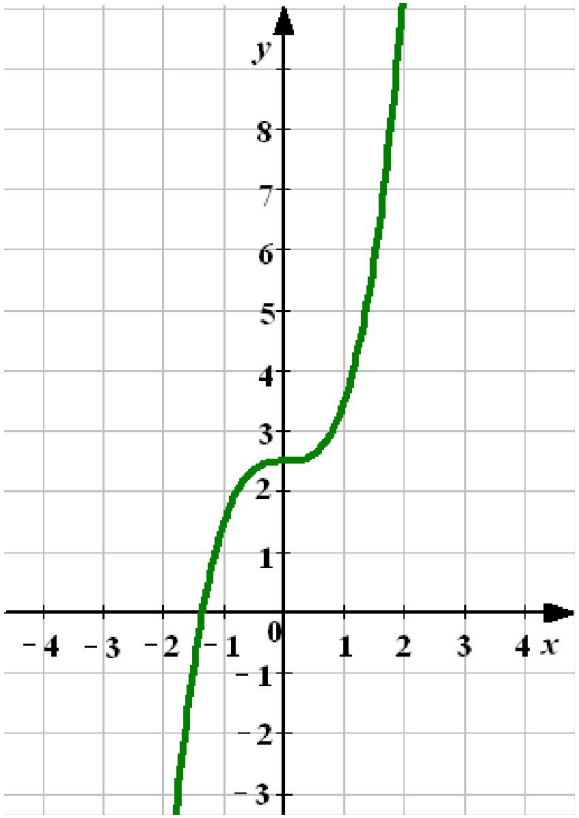
4. Определите график функции:

$$ó = õ^3 - 2{,}5$$



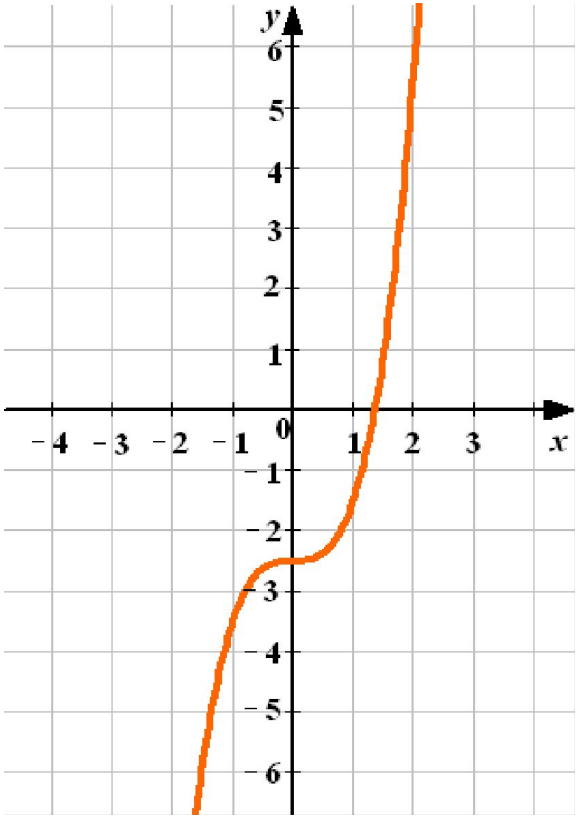
1.

Не верно



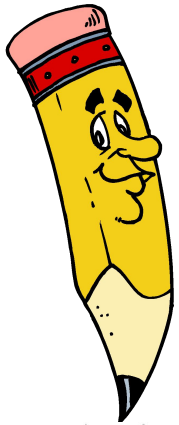
2.

Подумай!



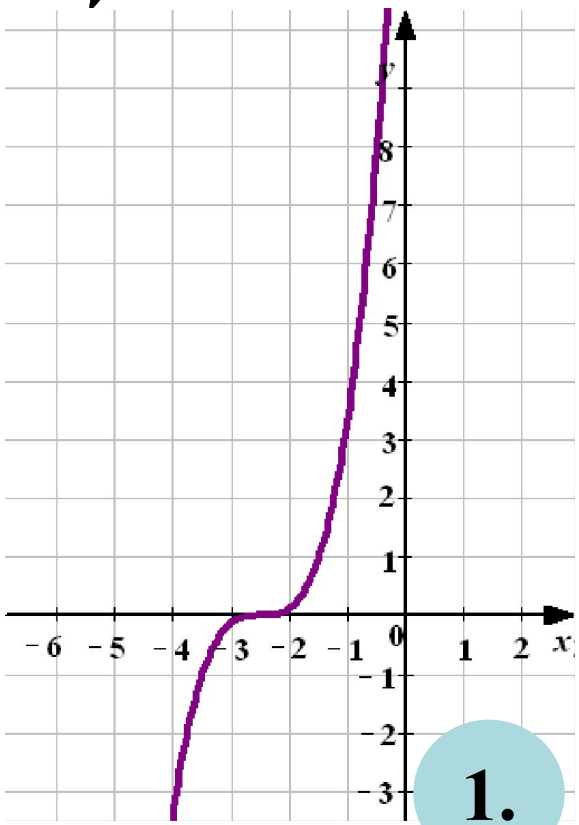
3.

Молодец!



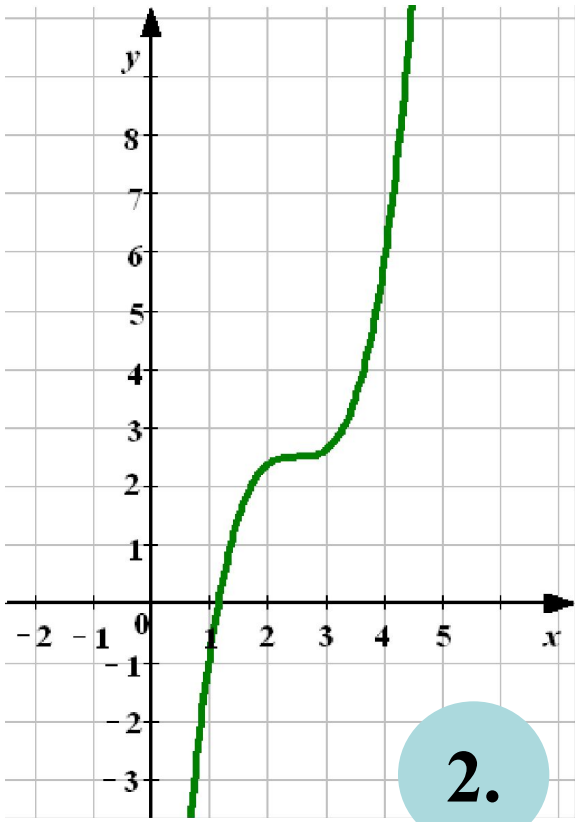
4. ***Укажите номер рисунка, соответствующий графику функции:***

$$y = (x - 2{,}5)^3$$



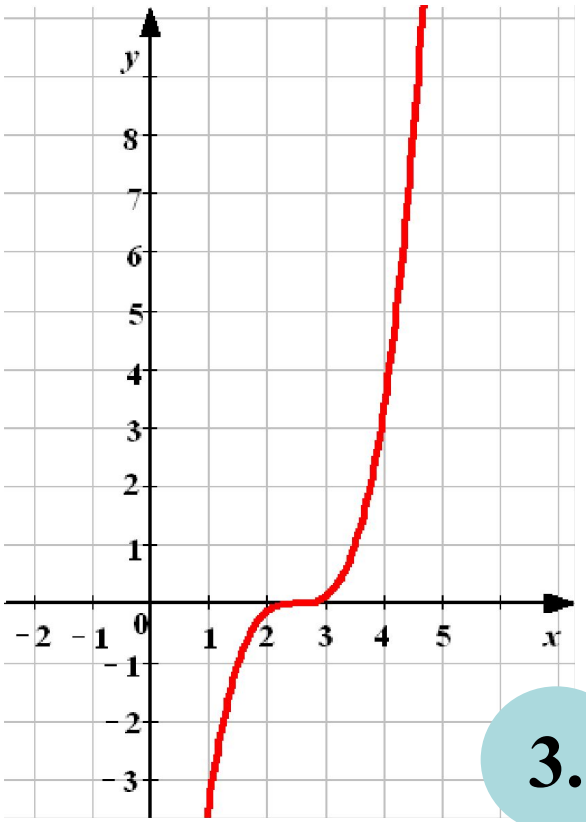
1.

Не верно



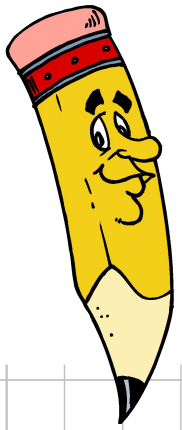
2.

Подумай!



3.

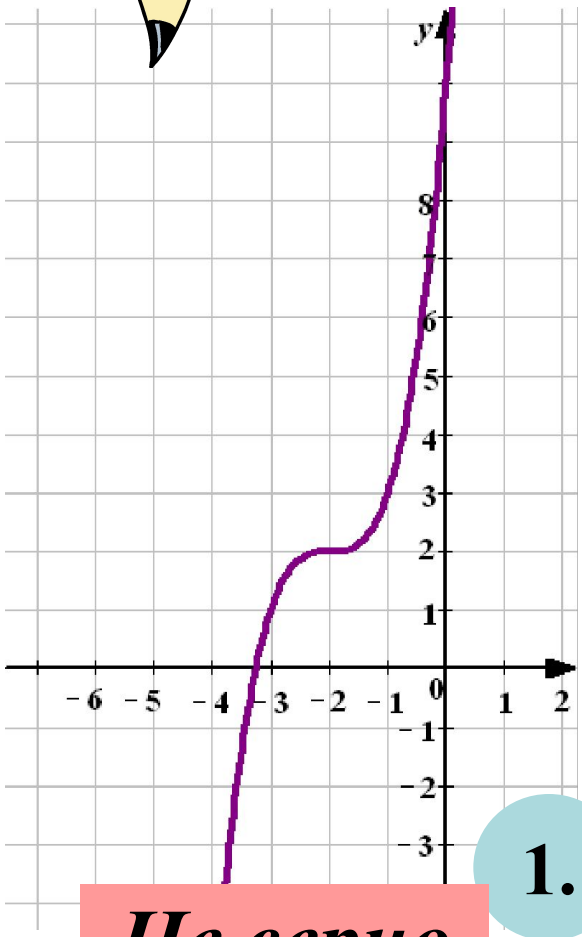
Молодец!



4.

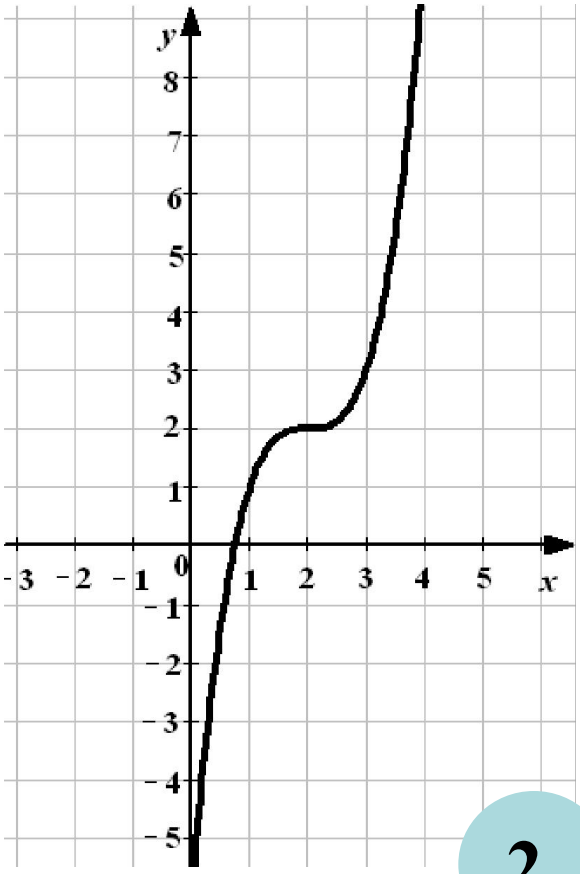
Укажите номер рисунка, соответствующий графику функции:

$$ó = (ô - 2)^3 + 2$$



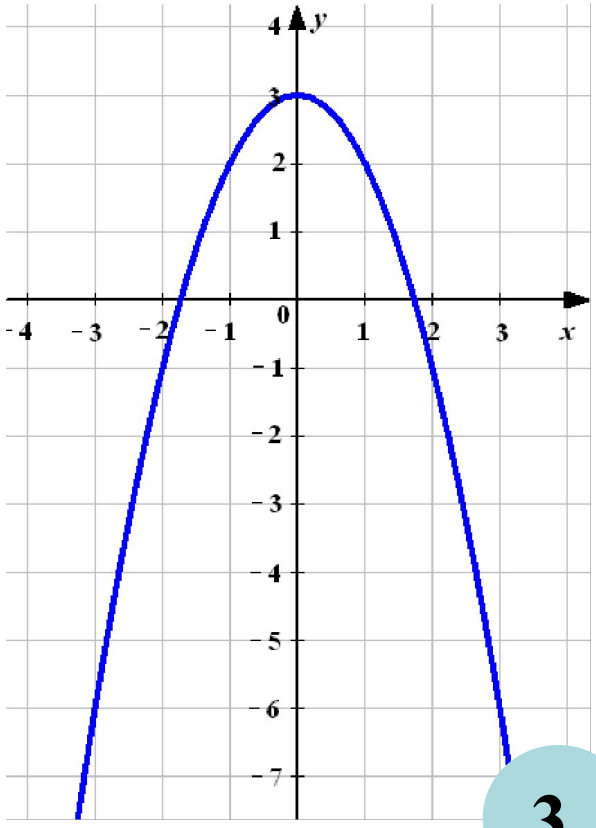
1.

Не верно



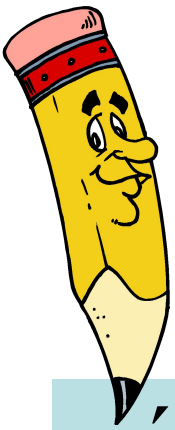
2.

Молодец!



3.

Подумай!



5. *Определите соответствие, между графиком функции и формулой:*

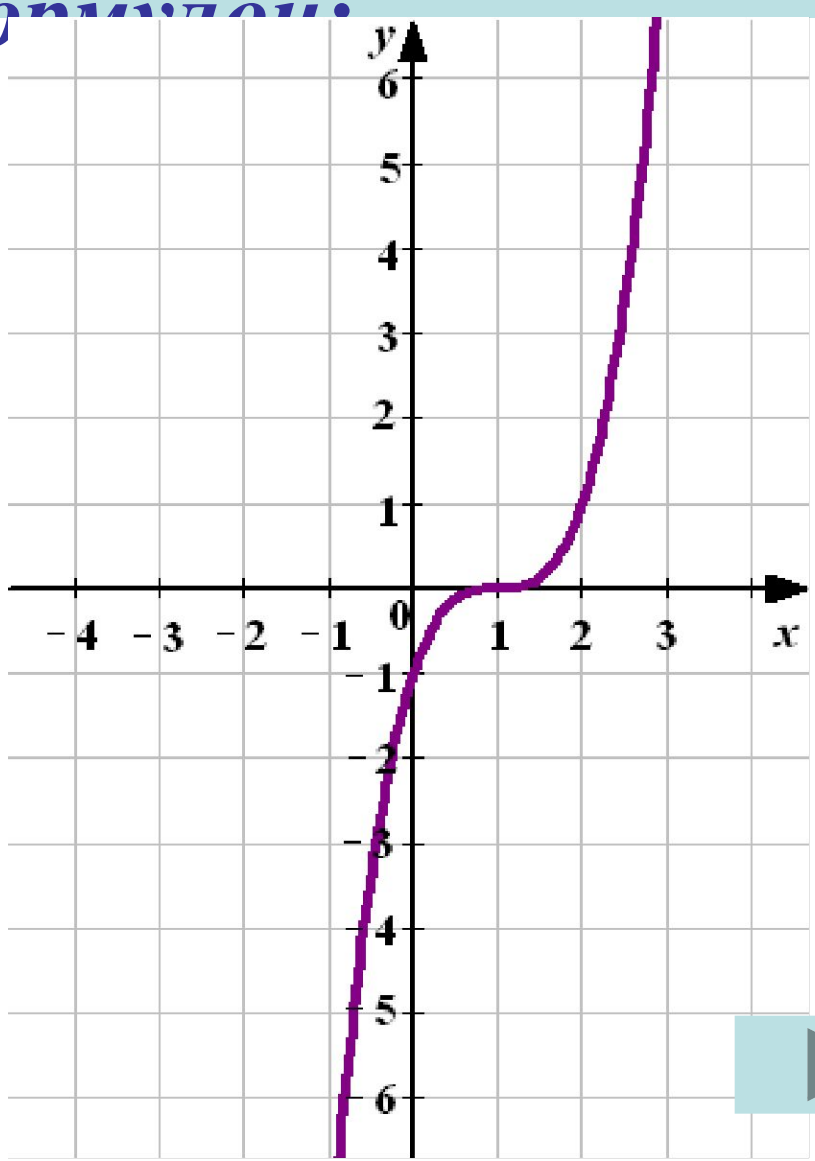
$$\acute{o} = (\tilde{o}+1)^3 + 1$$

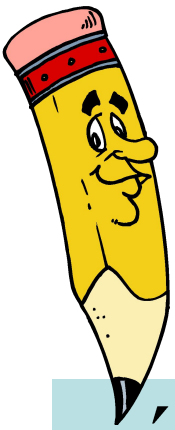
$$\acute{o} = \tilde{o}^3 - 1$$

$$\acute{o} = (\tilde{o}-1)^3 + 1$$

$$\acute{o} = -\tilde{o}^3 - 1$$

$$\acute{o} = (\tilde{o}-1)^3$$





5. *Определите соответствие, между графиком функции и формулой:*

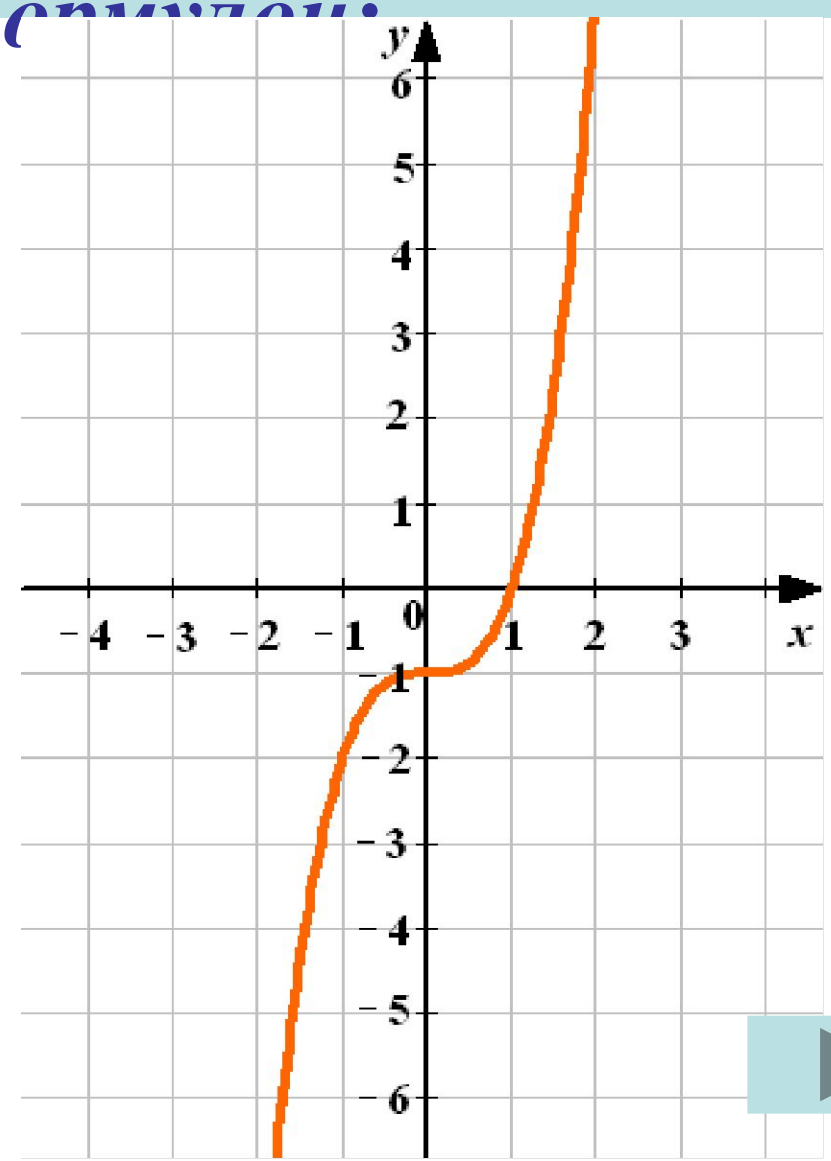
$$\acute{o} = (\tilde{o}+1)^3 + 1$$

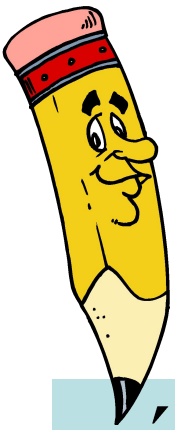
$$\acute{o} = \tilde{o}^3 - 1$$

$$\acute{o} = (\tilde{o}-1)^3 + 1$$

$$\acute{o} = -\tilde{o}^3 - 1$$

$$\acute{o} = (\tilde{o}-1)^3$$





5. *Определите соответствие, между графиком функции и формулой:*

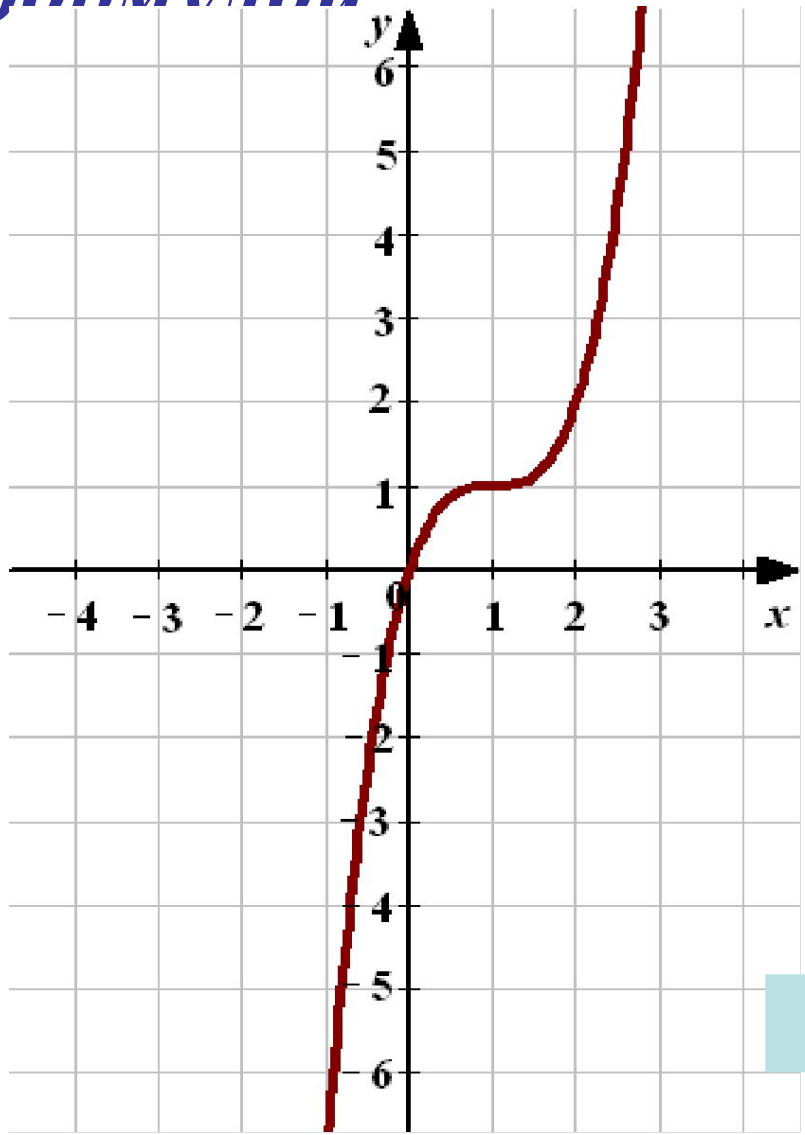
$$\acute{o} = (\tilde{o}+1)^3 + 1$$

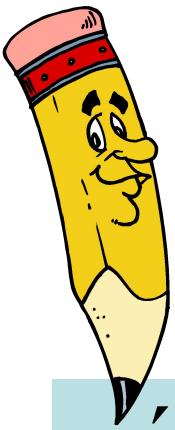
$$\acute{o} = \tilde{o}^3 - 1$$

$$\acute{o} = (\tilde{o}-1)^3 + 1$$

$$\acute{o} = -\tilde{o}^3 - 1$$

$$\acute{o} = (\tilde{o}-1)^3$$





8. *Определите соответствие, между графиком функции и формулой:*

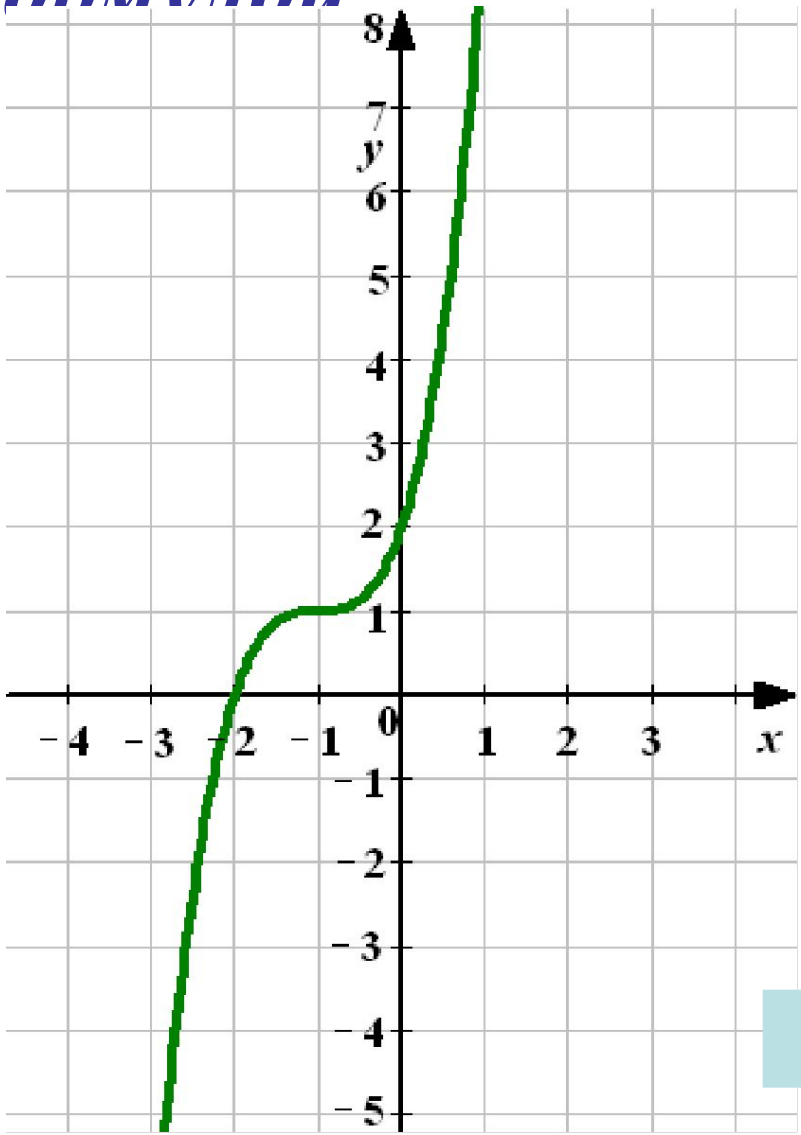
$$ó = (õ+1)^3 + 1$$

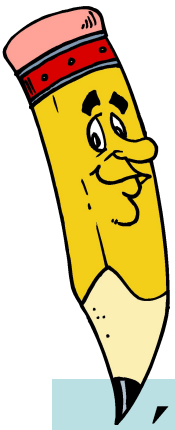
$$ó = õ^3 - 1$$

$$ó = (õ-1)^3 + 1$$

$$ó = -õ^3 - 1$$

$$ó = (õ-1)^3$$





8. ***Определите соответствие, между графиком функции и формулой:***

$$y = (x+1)^3 + 1$$

$$y = x^3 - 1$$

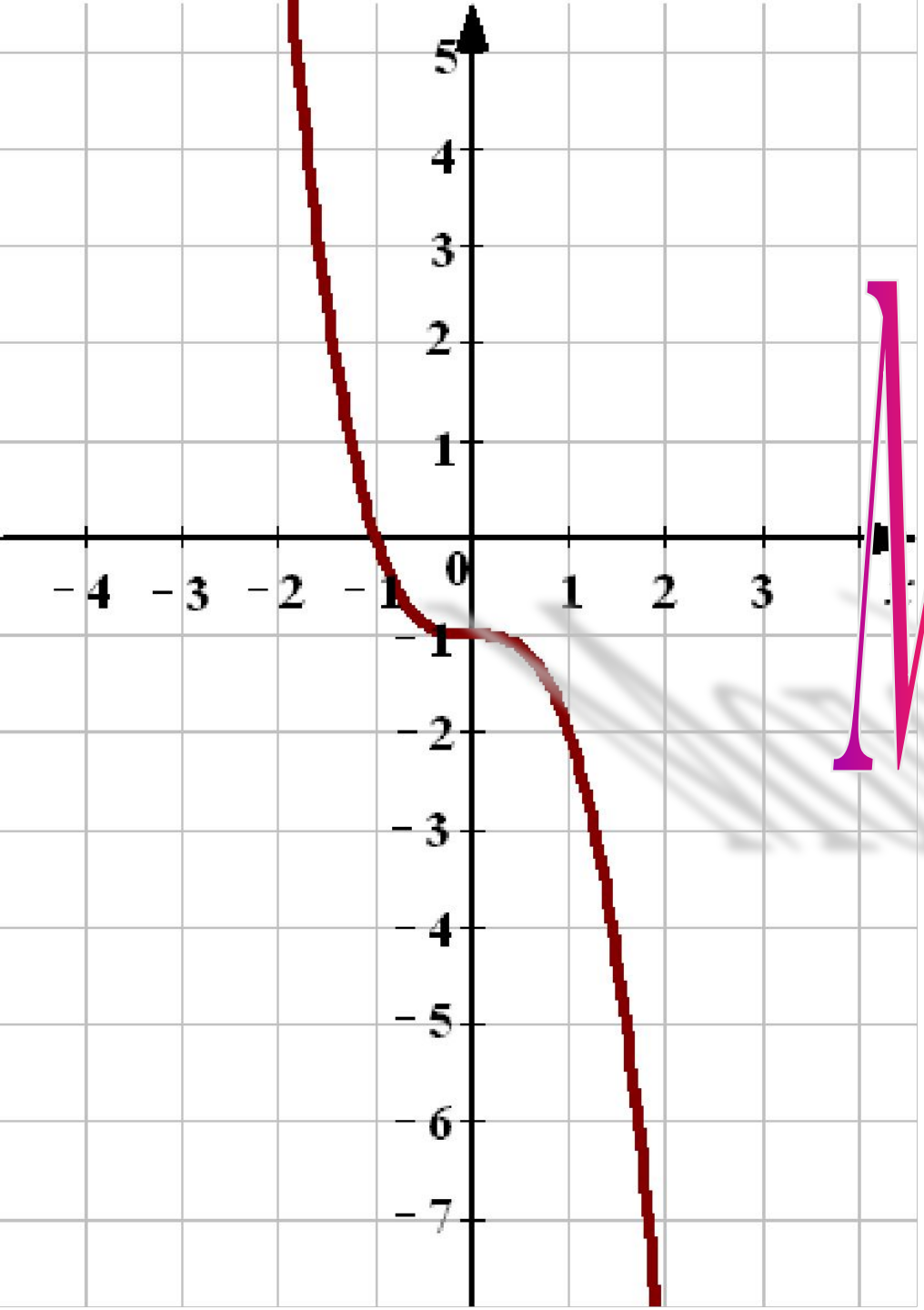
$$y = (x-1)^3 + 1$$

$$y = -x^3 - 1$$

$$y = (x-1)^3$$

График какой функции отсутствовал в задании?.

Самостоятельно построить график функции.



Молодцы!