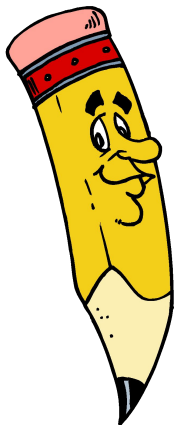


*Функция  $y = x^2$   
График функции.*

*7 класс.*

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





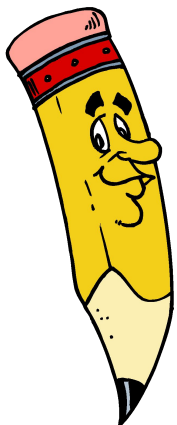
1.

*Умножьте одночлены:*

$$3\tilde{o}^2 \acute{o} \cdot (-0,5\tilde{o}^3 \acute{o}^2) \cdot 2\tilde{o}\acute{o}^4 = -3\tilde{o}^6 \acute{o}^7$$

$$-3\tilde{o}^3 \acute{o} \cdot 0,6\tilde{o}\acute{o}^2 \cdot (-5\tilde{o}^3 \acute{o}^4) = 9\tilde{o}^7 \acute{o}^7$$

$$100\tilde{o}\acute{o} \cdot 0,3\tilde{o}^6 \acute{o}^2 \cdot (-0,2\acute{o}^4) = -6\tilde{o}^7 \acute{o}^7$$



2.

*Представьте выражения  
в виде одночлена  
стандартного вида:*

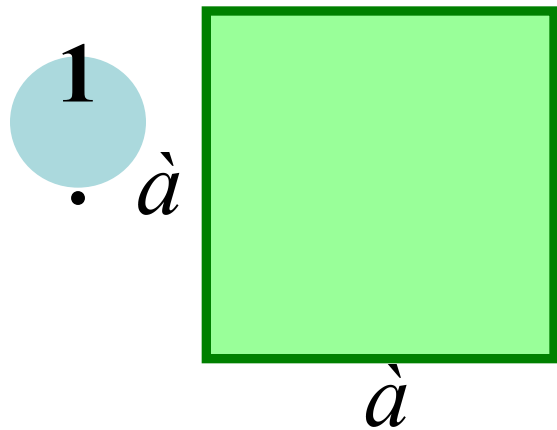
$$(-3\tilde{o}^3 \acute{o})^2 \cdot (-2\tilde{o}\acute{o}^2)^3 \cdot 0,5\tilde{o}^2 \acute{o}^3 = -36\tilde{o}^{11} \acute{o}^9$$

$$-3\tilde{o}^3 \acute{o} \cdot (0,2\tilde{o}\acute{o}^2)^2 \cdot (-5\tilde{o}^2 \acute{o}^3)^2 = -3\tilde{o}^9 \acute{o}^{11}$$

$$(-2\tilde{o}^3 \acute{o}^2)^3 \cdot 3\tilde{o}^3 \acute{o}^4 \cdot (-0,5\tilde{o}^2 \acute{o}) = 12\tilde{o}^{14} \acute{o}^{11}$$

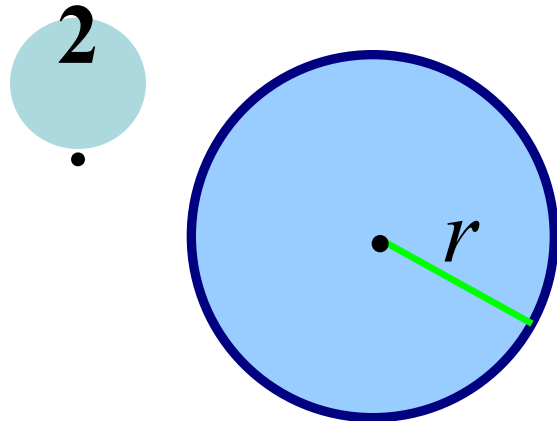
# Примеры, приводящие к понятию функции

$$O = \tilde{O}^2$$



$$S = a^2$$

*Зависимая  
переменная*



$$S = \pi r^2$$

*Независима  
я  
переменная*

# График функции $O = \tilde{O}^2$



Построим график функции по точкам:

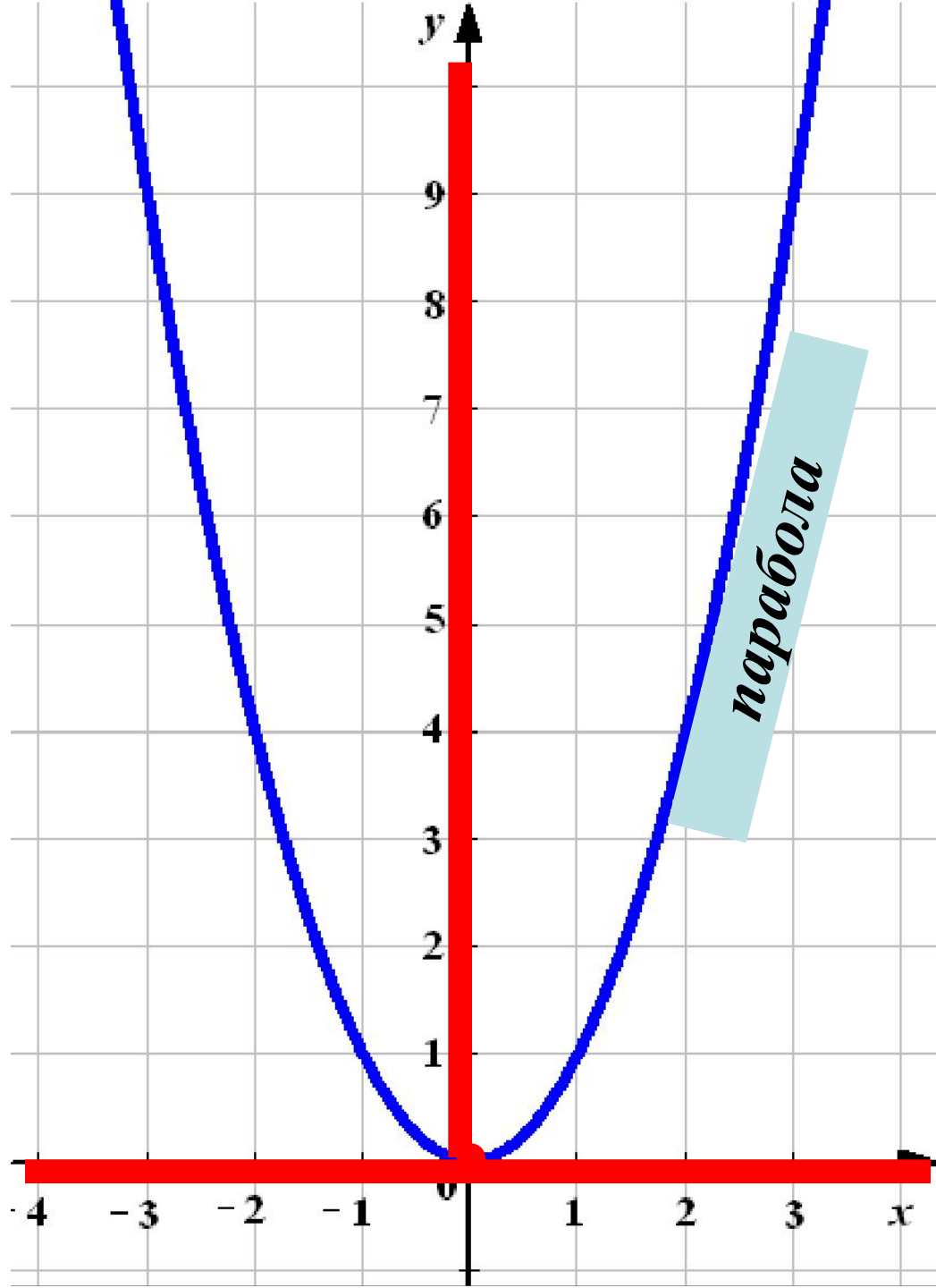
|     |      |        |      |        |      |        |     |
|-----|------|--------|------|--------|------|--------|-----|
| $x$ | $-3$ | $-2,5$ | $-2$ | $-1,5$ | $-1$ | $-0,5$ | $0$ |
| $y$ | $9$  | $6,25$ | $4$  | $2,25$ | $1$  | $0,25$ | $0$ |

|     |     |        |     |        |     |        |     |
|-----|-----|--------|-----|--------|-----|--------|-----|
| $x$ | $0$ | $0,5$  | $1$ | $1,5$  | $2$ | $2,5$  | $3$ |
| $y$ | $0$ | $0,25$ | $1$ | $2,25$ | $4$ | $6,25$ | $9$ |

| $x$ | $y$  | $x$  |
|-----|------|------|
| 0   | 0    | 0    |
| 0,5 | 0,25 | -0,5 |
| 1   | 1    | -1   |
| 1,5 | 2,25 | -1,5 |
| 2   | 4    | -2   |
| 2,5 | 6,25 | -2,5 |
| 3   | 9    | -3   |

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

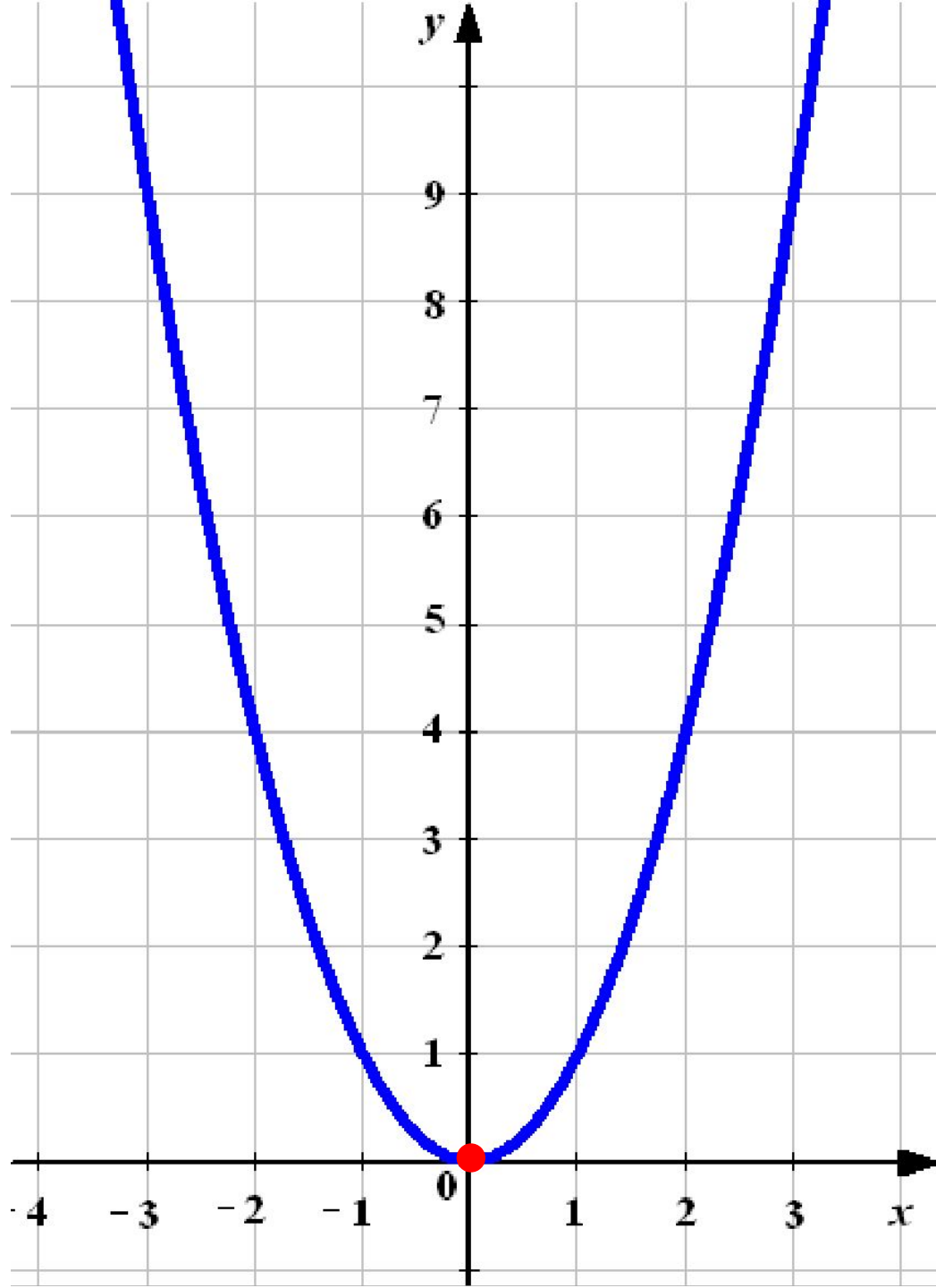
$$E_y = (0; +\infty)$$



| $x$ | $y$  | $x$  |
|-----|------|------|
| 0   | 0    | 0    |
| 0,5 | 0,25 | -0,5 |
| 1   | 1    | -1   |
| 1,5 | 2,25 | -1,5 |
| 2   | 4    | -2   |
| 2,5 | 6,25 | -2,5 |
| 3   | 9    | -3   |

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

$$E_y = (0; +\infty)$$

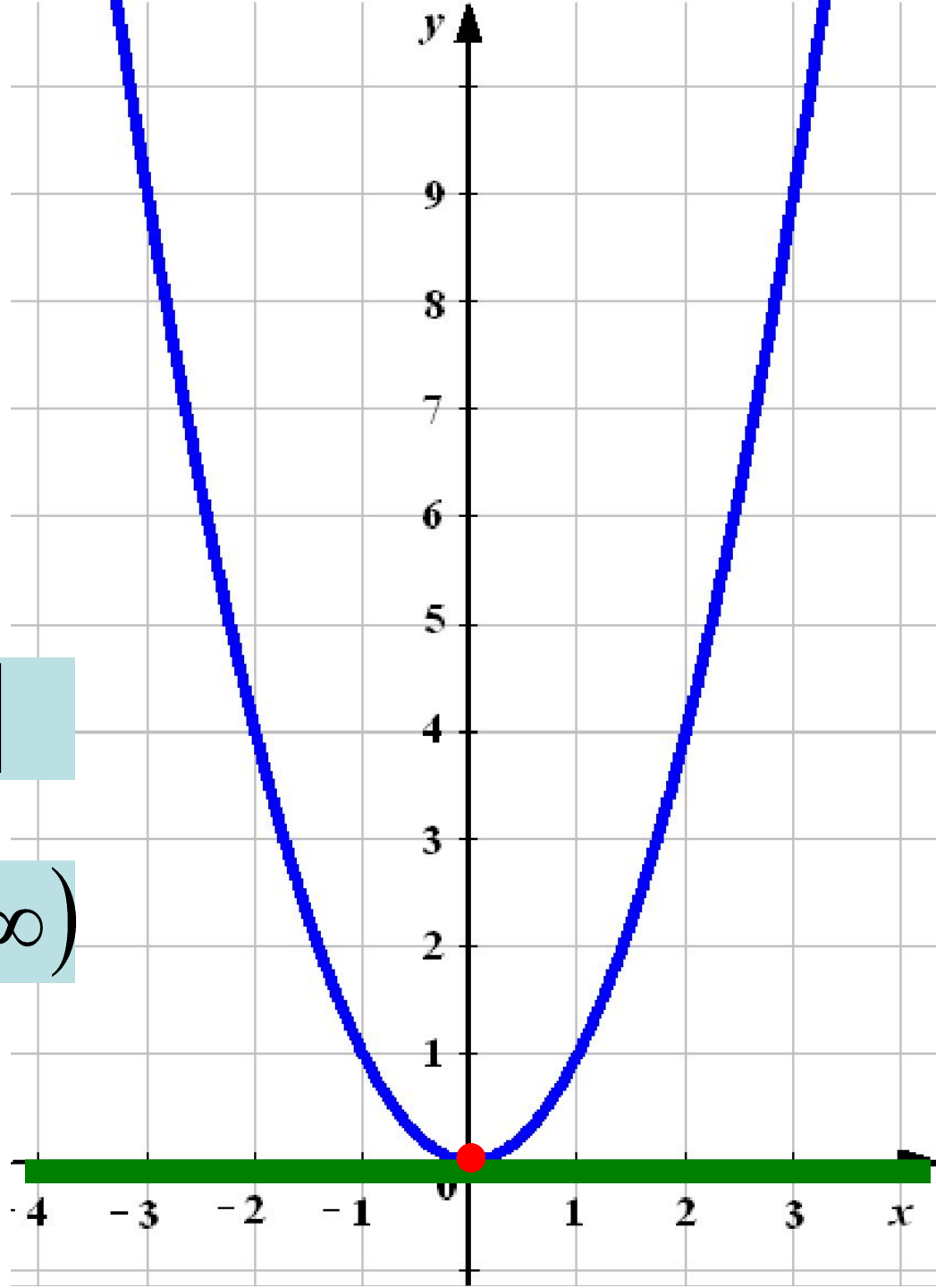


$$D_y = (-\infty; +\infty)$$

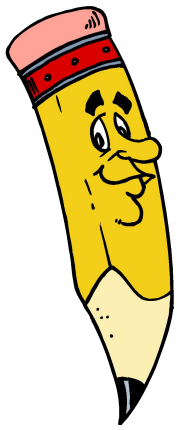
$$E_y = (0; +\infty)$$

$$\text{Óáûâàãò} (-\infty; 0]$$

$$\text{Âîçðàñòàãò} [0; +\infty)$$







1.

*Сравните  
числа:*

$1,1^2$

$<$

$2,3^2$

$(-2,1)^2$

$>$

$(-1,2)^2$

$(-3,2)^2$

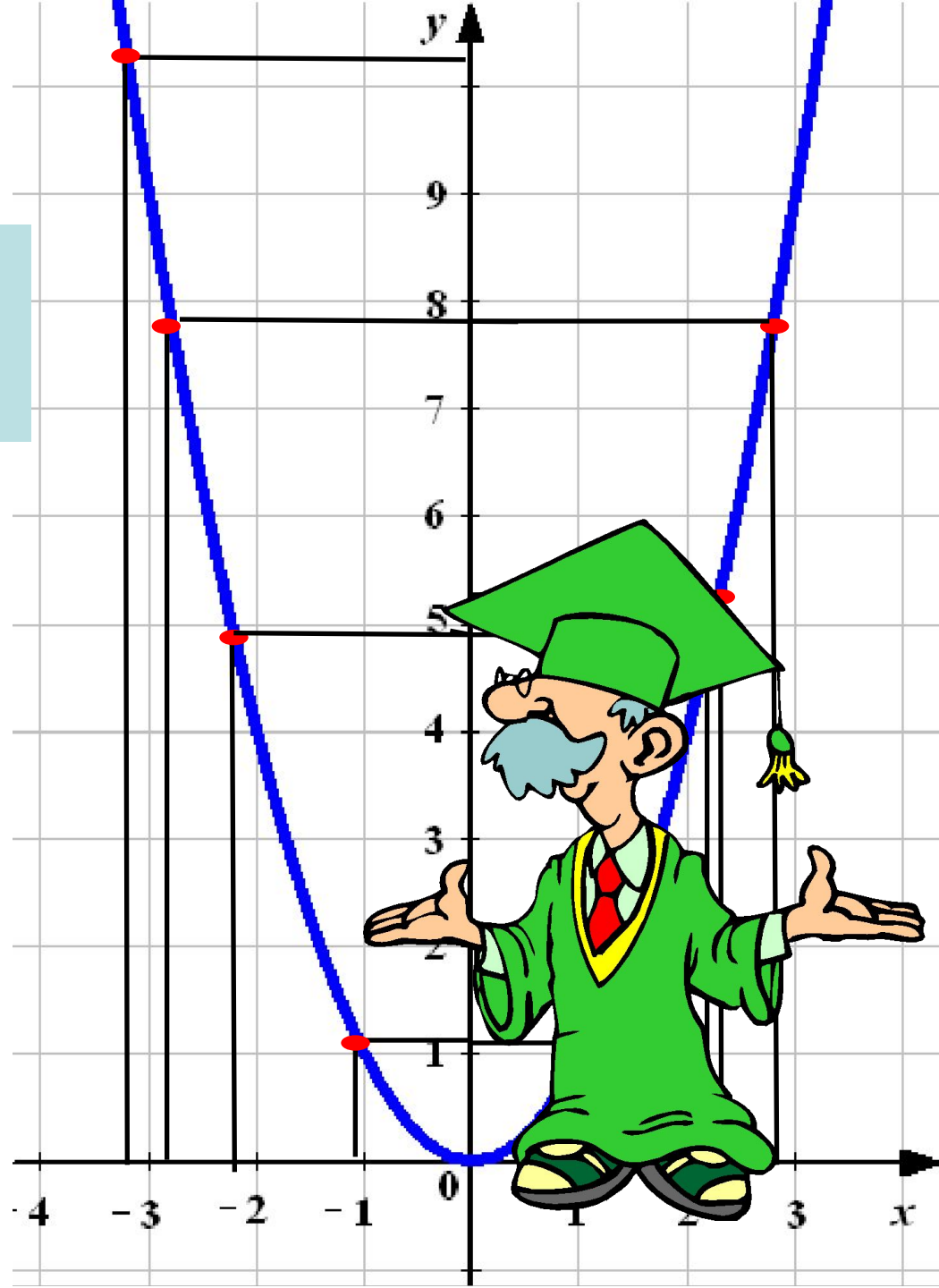
$>$

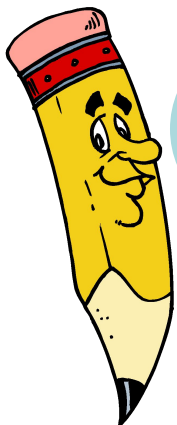
$2,2^2$

$2,8^2$

$=$

$(-2,8)^2$





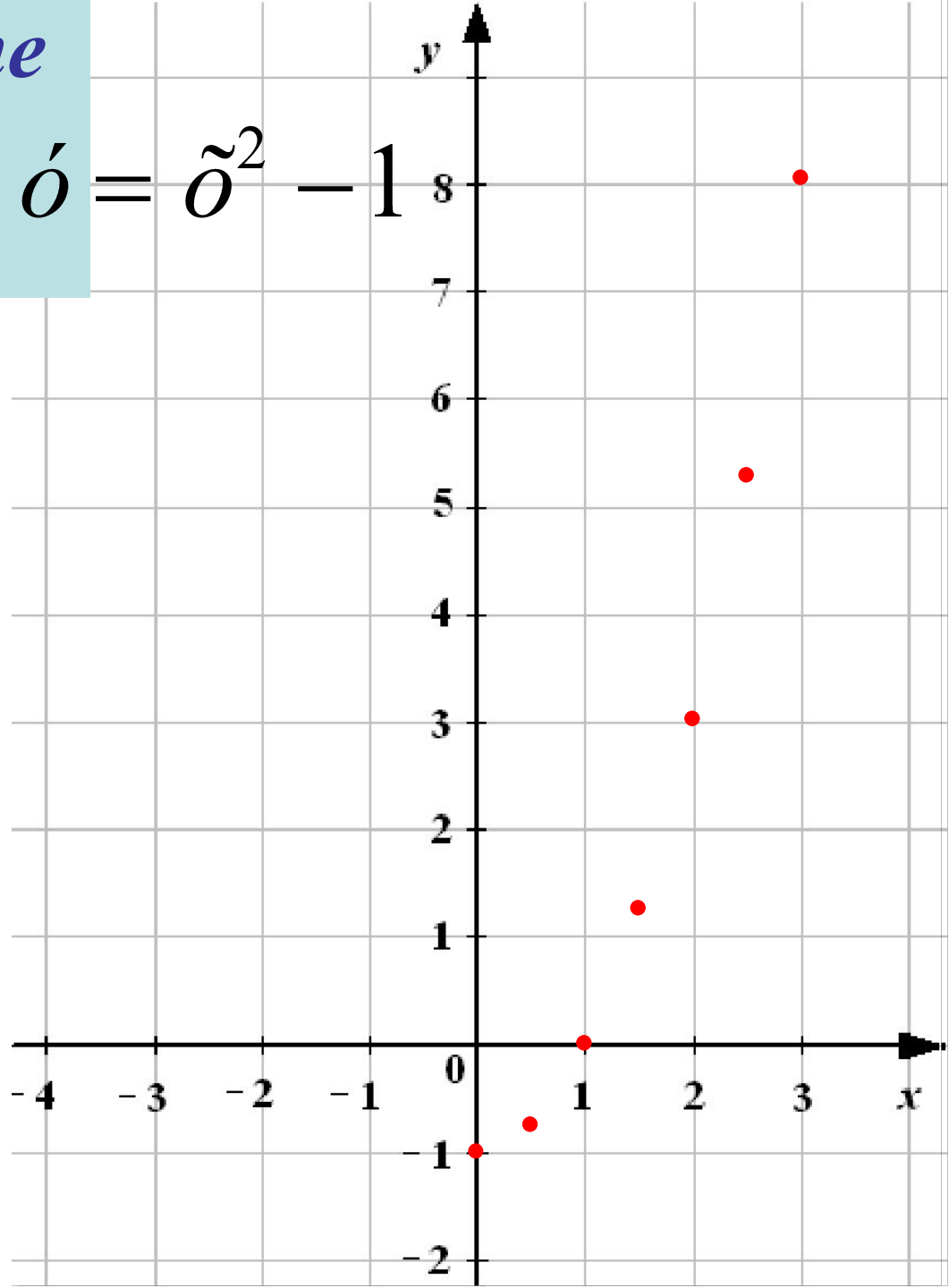
2.

Постройте

график  
функции:

$$y = x^2 - 1$$

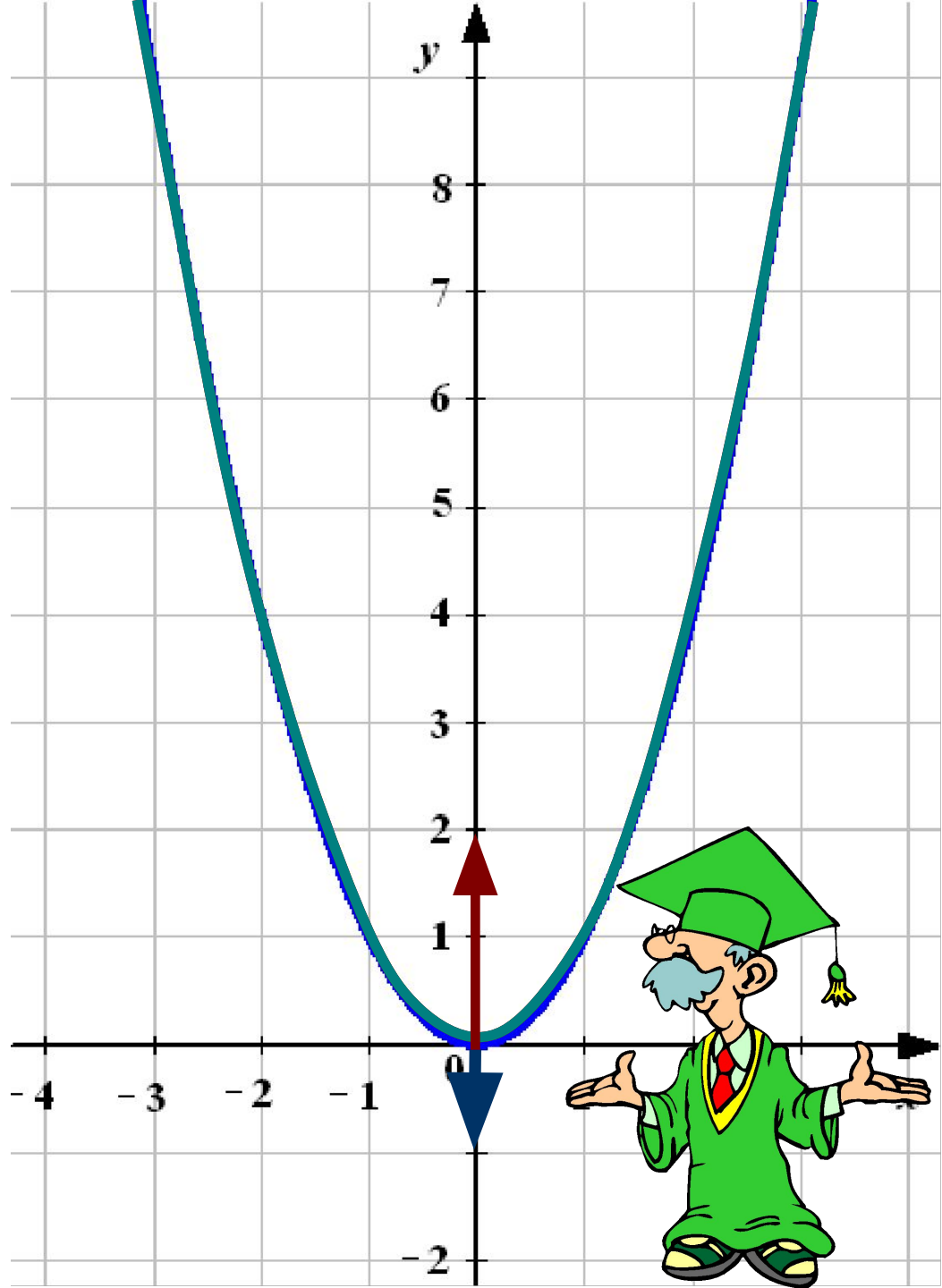
| $x$ | $y$   |
|-----|-------|
| 0   | -1    |
| 0,5 | -0,75 |
| 1   | 0     |
| 1,5 | 1,25  |
| 2   | 3     |
| 2,5 | 5,25  |
| 3   | 8     |

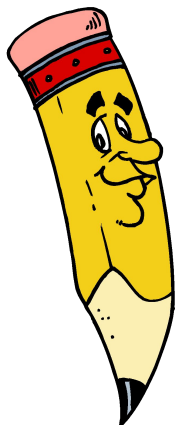


$$o' = \tilde{o}^2 + 2$$

$$o' = \tilde{o}^2$$

$$o' = \tilde{o}^2 - 1$$

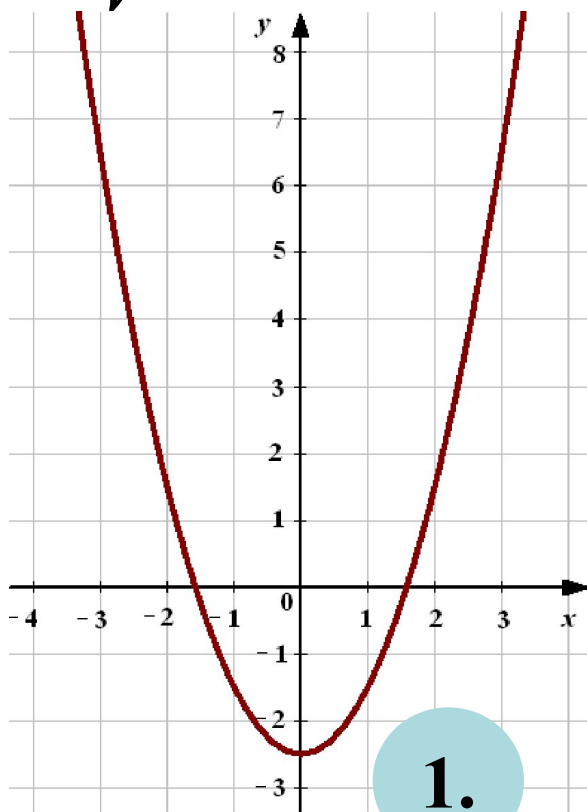




3.

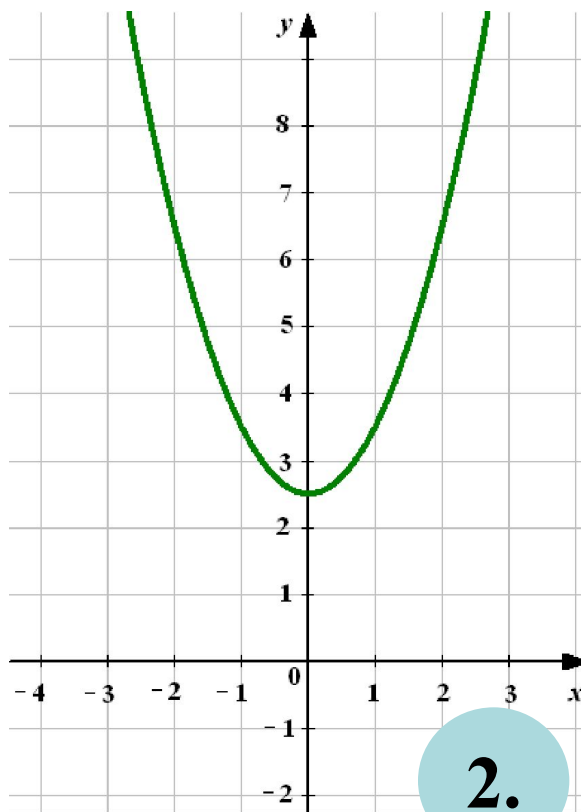
Укажите номер рисунка,  
соответствующий графику

функции:  
$$o = \tilde{o}^2 + 2,5$$



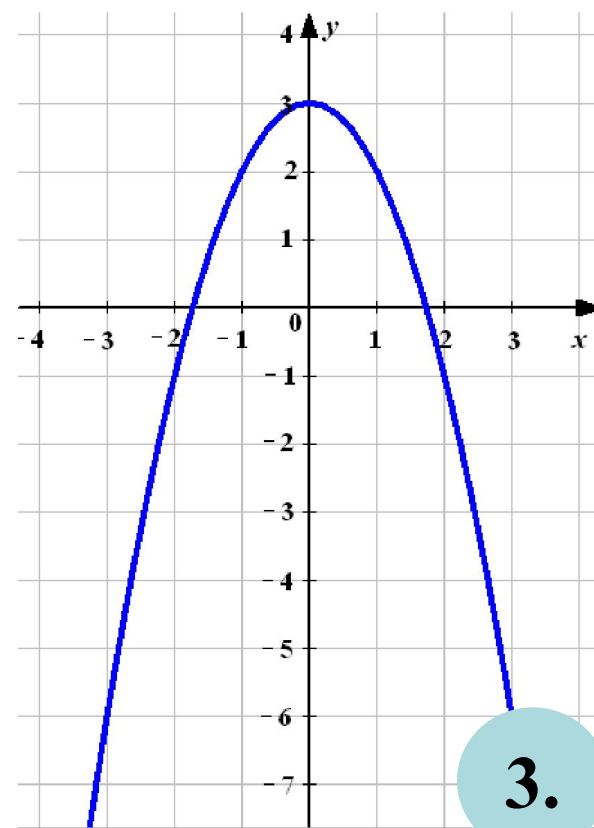
1.

*Не верно*



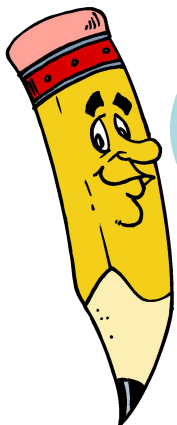
2.

*Молодец!*



3.

*Подумай!*



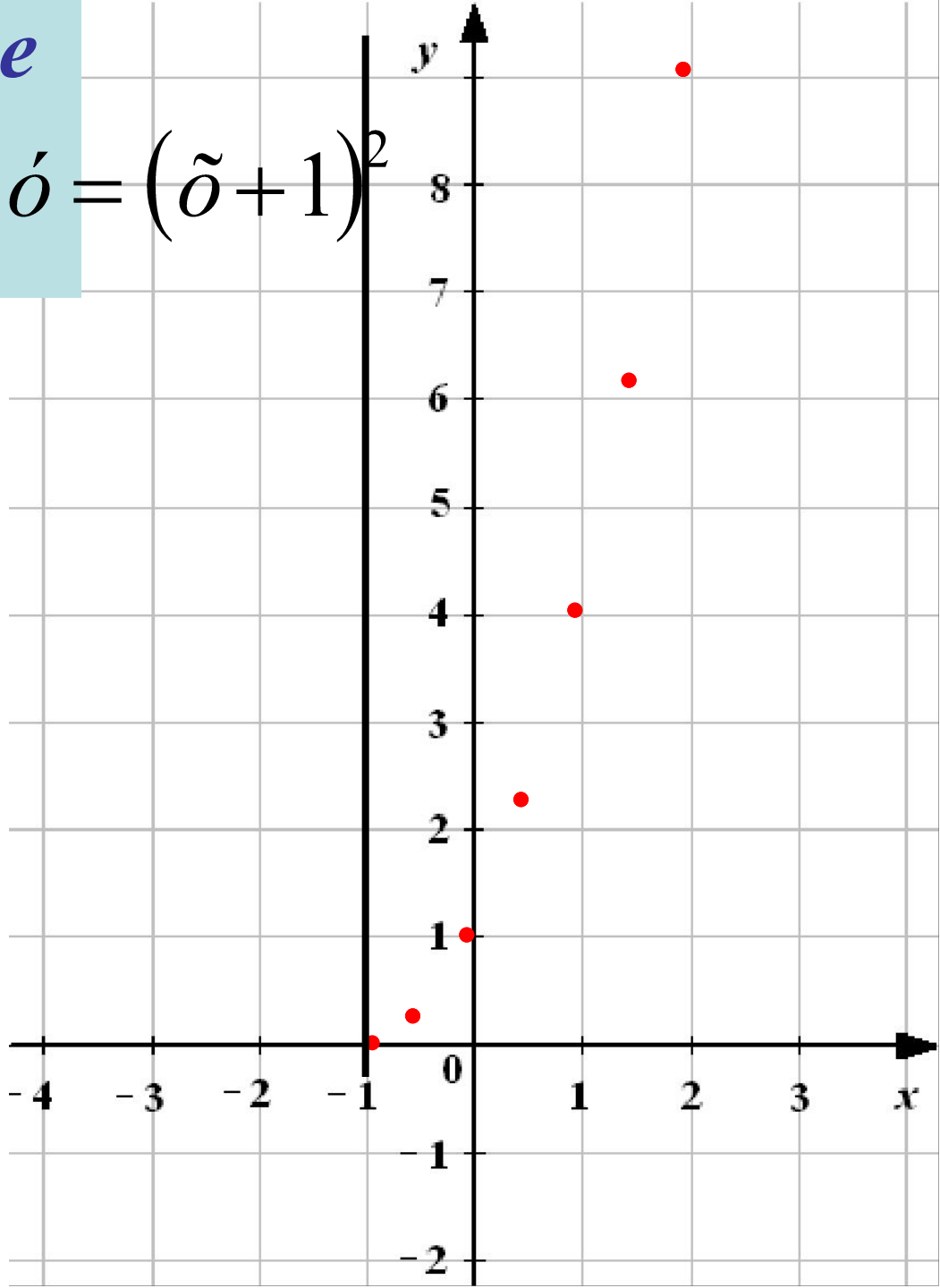
4.

Постройте

график  
функции:

$$y = (\tilde{\delta} + 1)^2$$

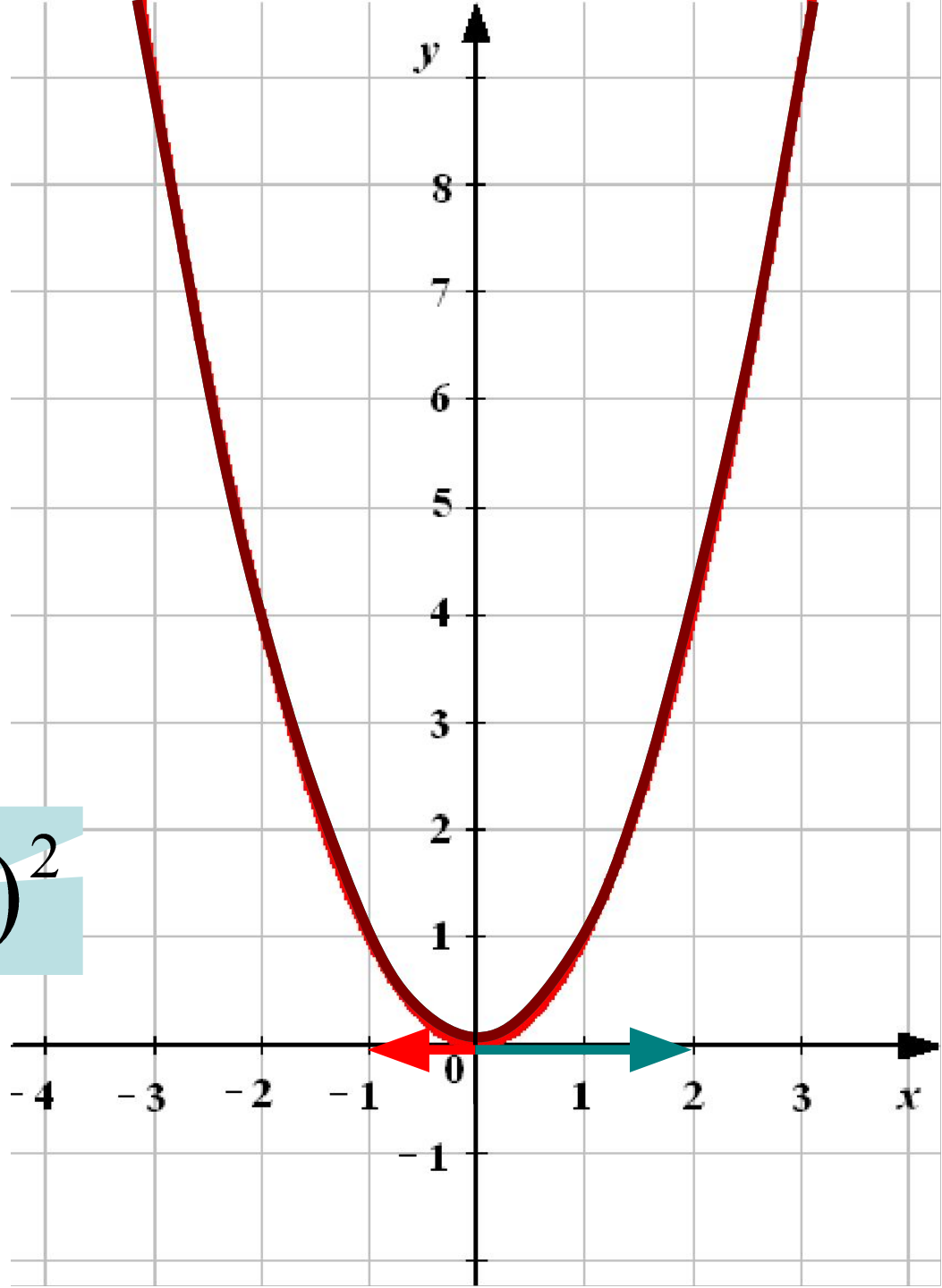
| $x$  | $y$  |
|------|------|
| -1   | 0    |
| -0,5 | 0,25 |
| 0    | 1    |
| 0,5  | 2,25 |
| 1    | 4    |
| 1,5  | 6,25 |
| 2    | 9    |

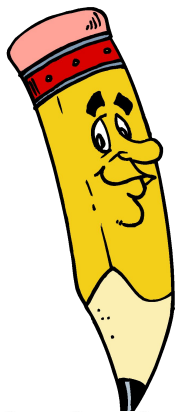


$$o' = (\tilde{o} - 2)^2$$

$$o' = \tilde{o}^2$$

$$o' = (\tilde{o} + 1)^2$$

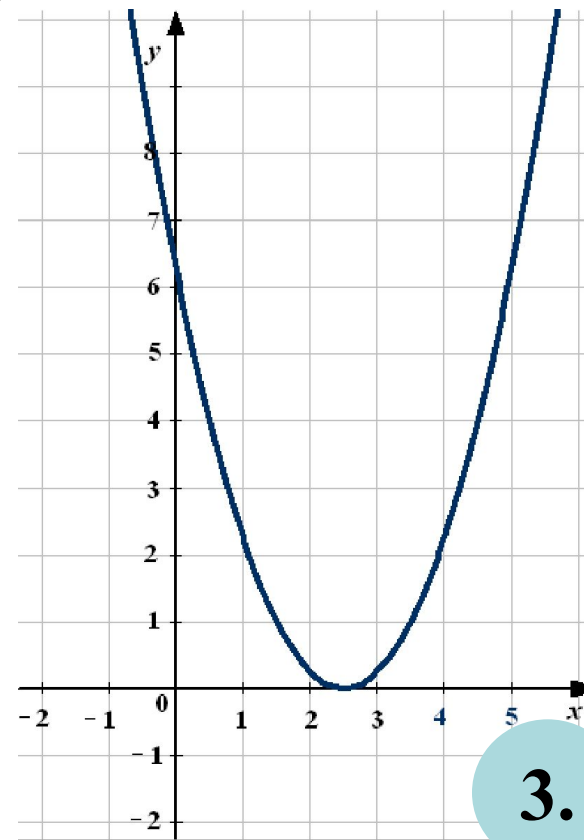
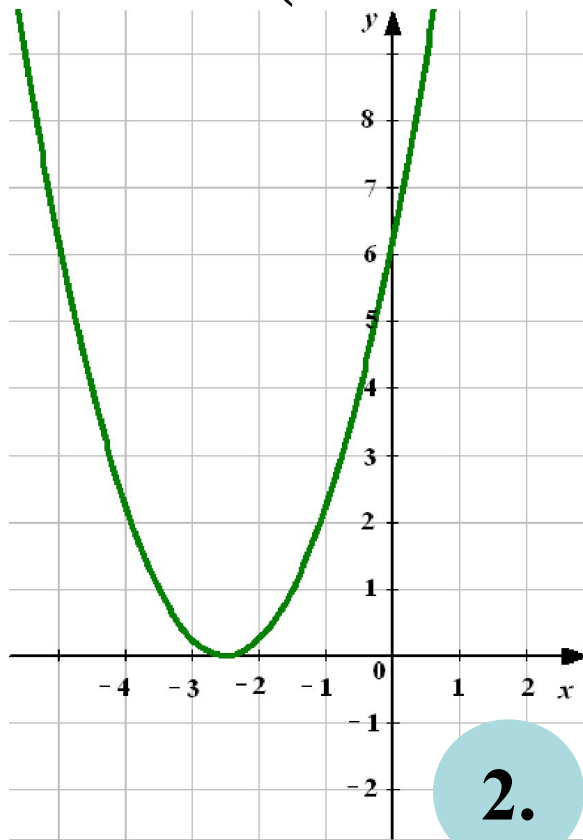
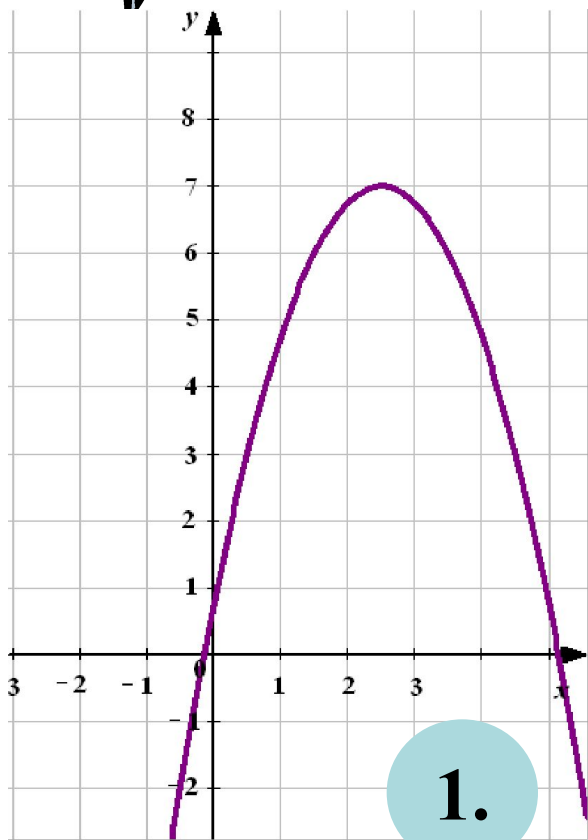




5.

Укажите номер рисунка,  
соответствующий графику

функции:  
$$o = (\tilde{o} - 2,5)^2$$



**Не верно**

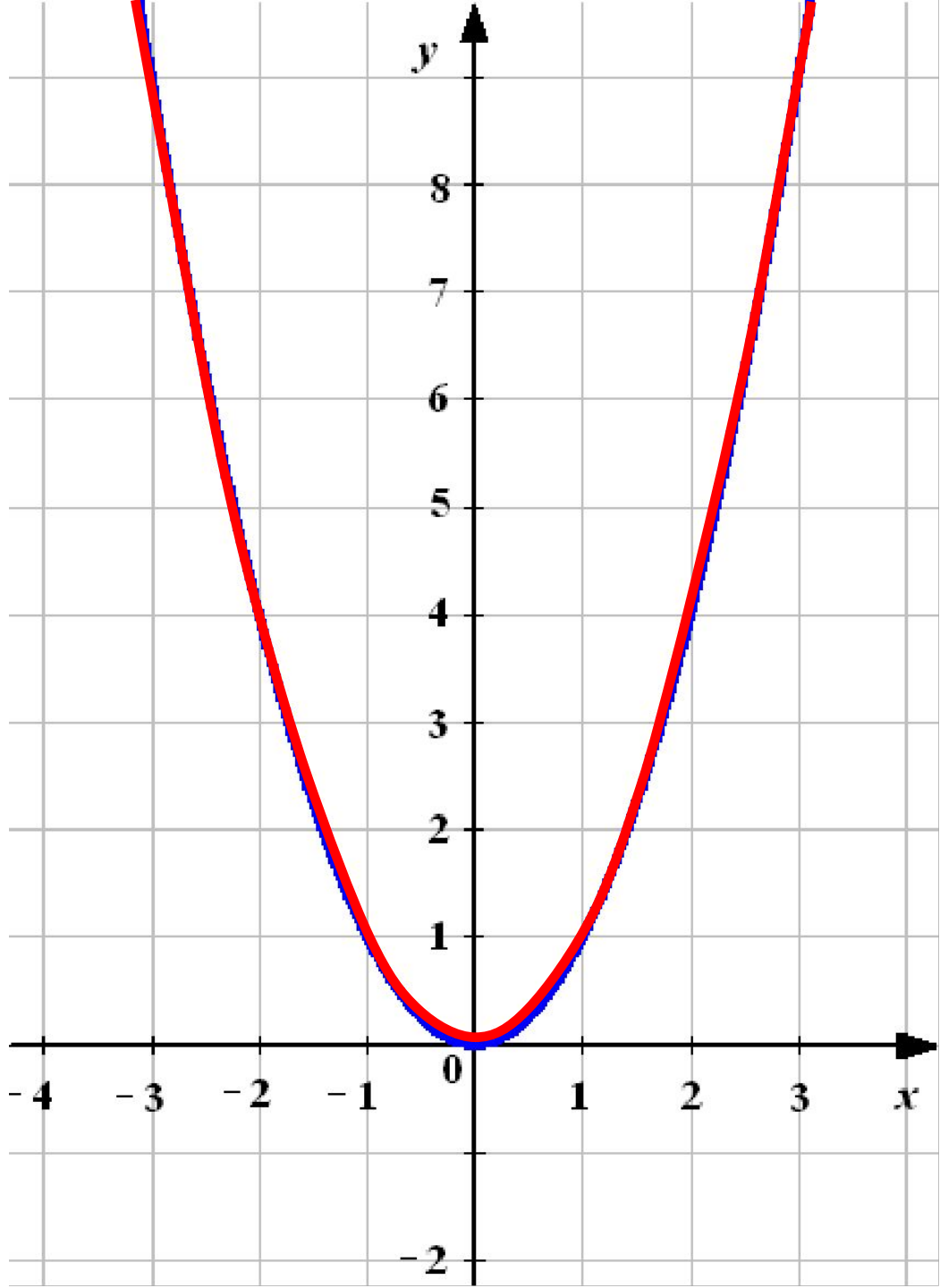
**Подумай!**

**Молодец!**

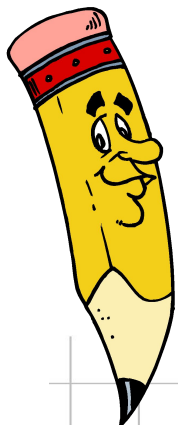
$$o' = (\tilde{o} - 2)^2$$

$$o' = \tilde{o}^2$$

$$o' = (\tilde{o} - 2)^2 - 1$$

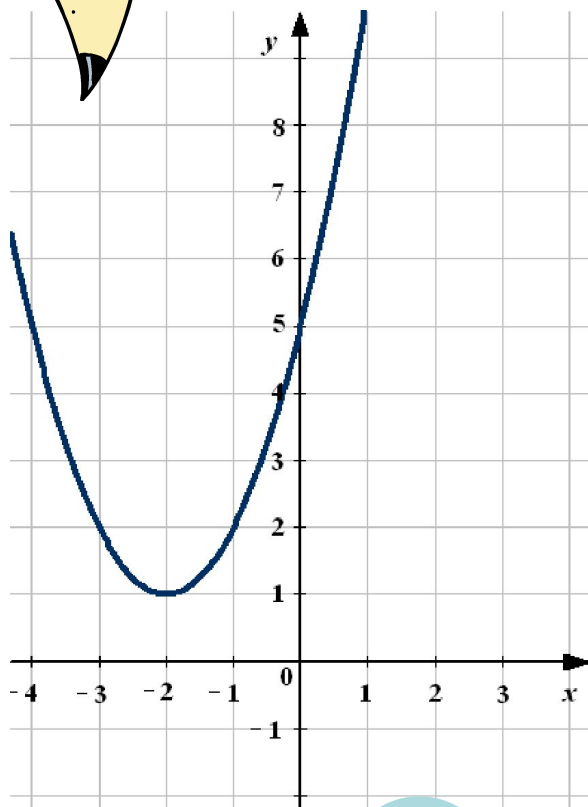






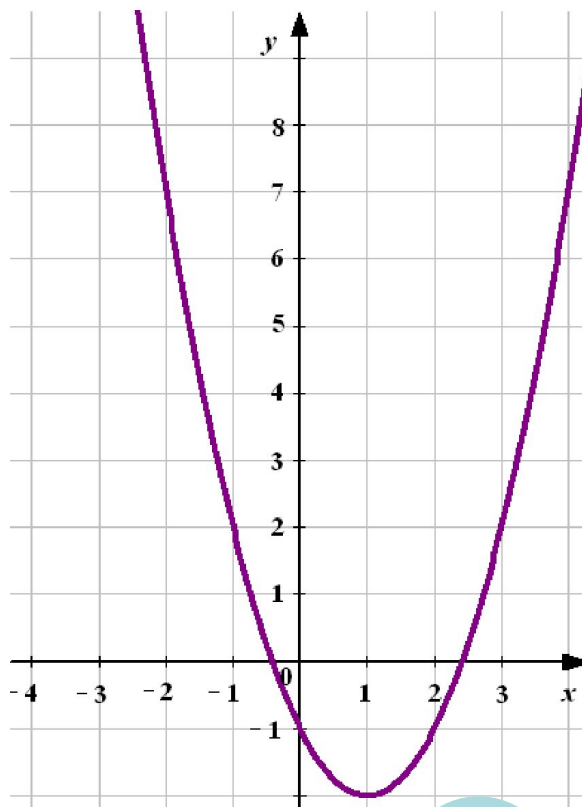
## 6. Определите график функции:

$$o = (\tilde{o} - 2)^2 + 1$$



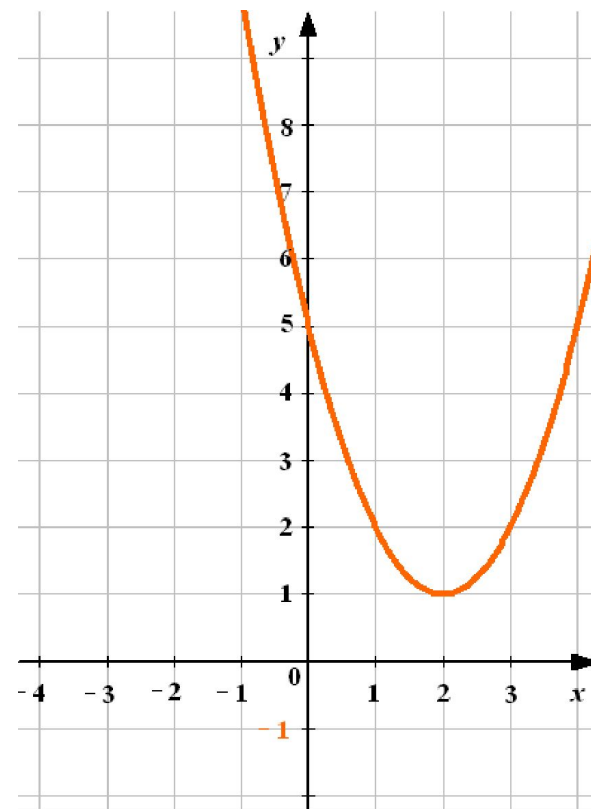
1.

*Не верно*



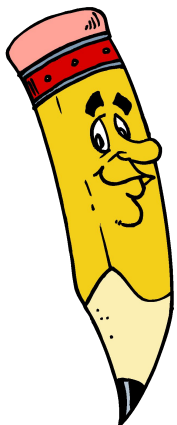
2.

*Подумай!*



3.

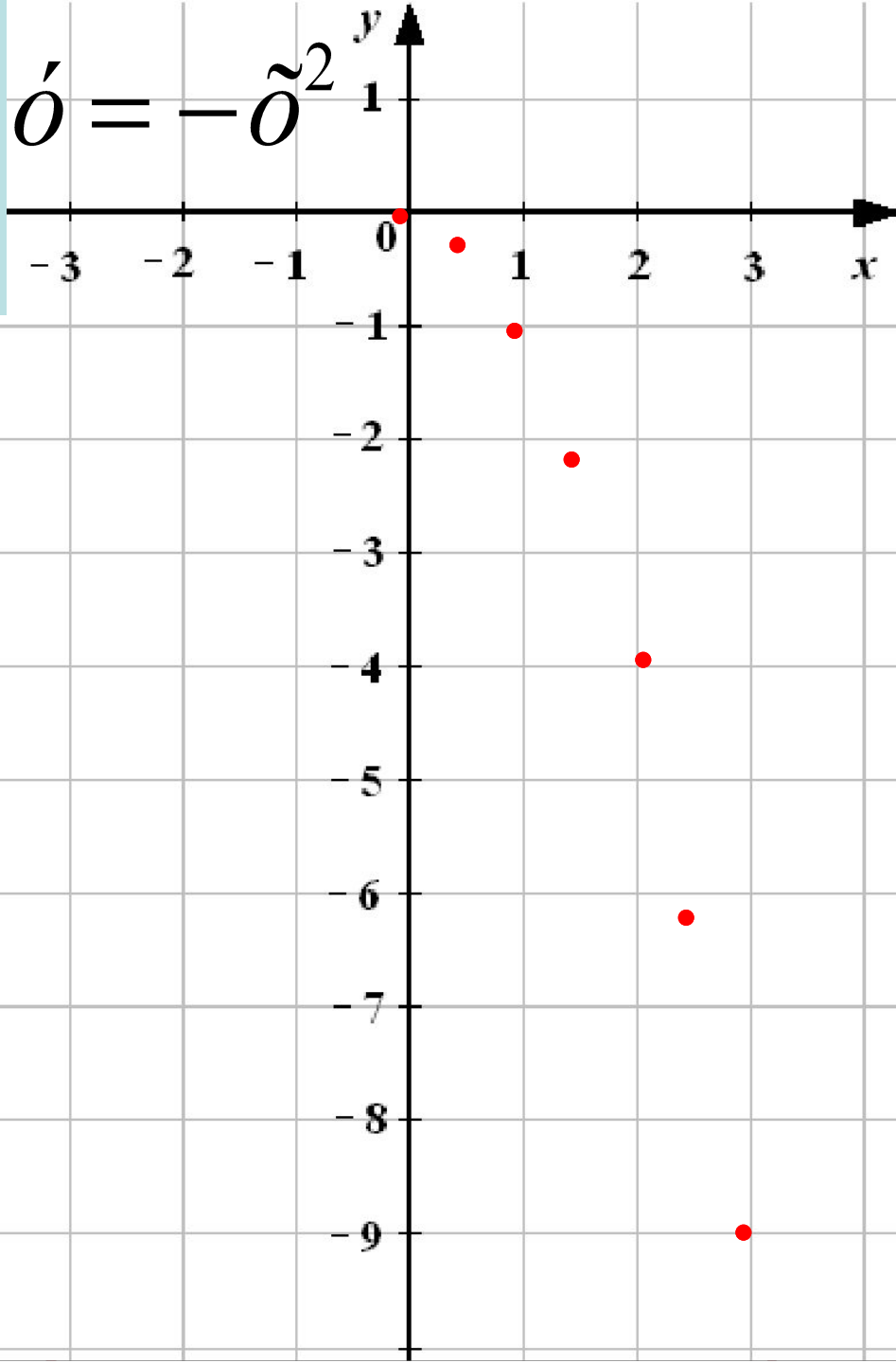
*Молодец!*

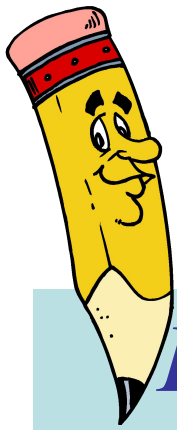


4.

Постройте  
график  
функции:

| $x$ | $y$   |
|-----|-------|
| 0   | 0     |
| 0,5 | -0,25 |
| 1   | -1    |
| 1,5 | -2,25 |
| 2   | -4    |
| 2,5 | -6,25 |
| 3   | -9    |

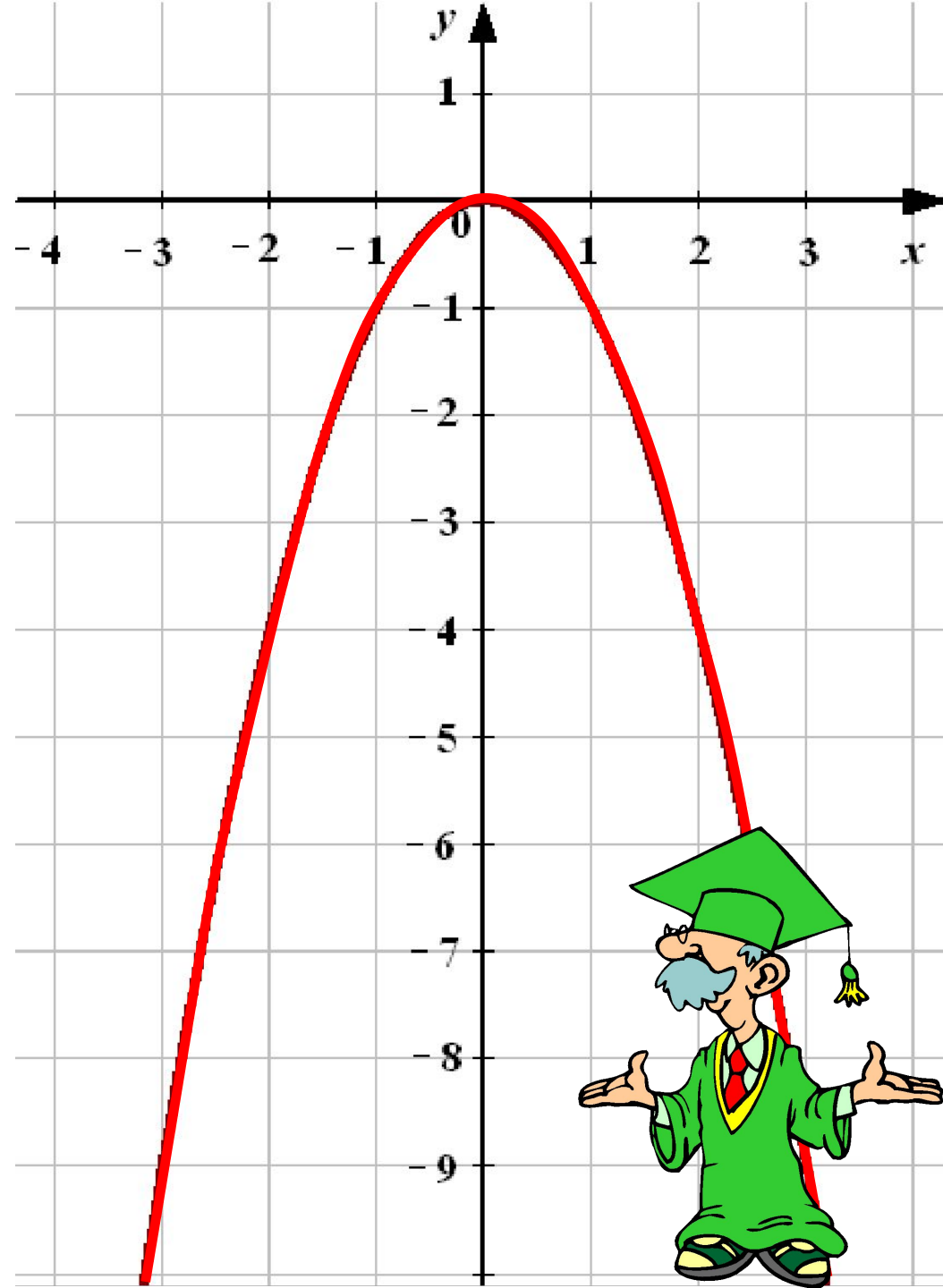


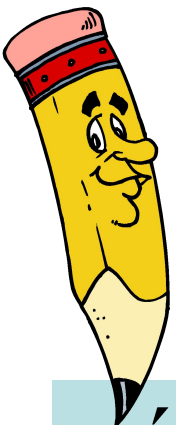


7.

*Постройте  
график  
функции,  
используя  
правила  
перемещения:*

$$y = -(\delta + 2)^2 - 3$$





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

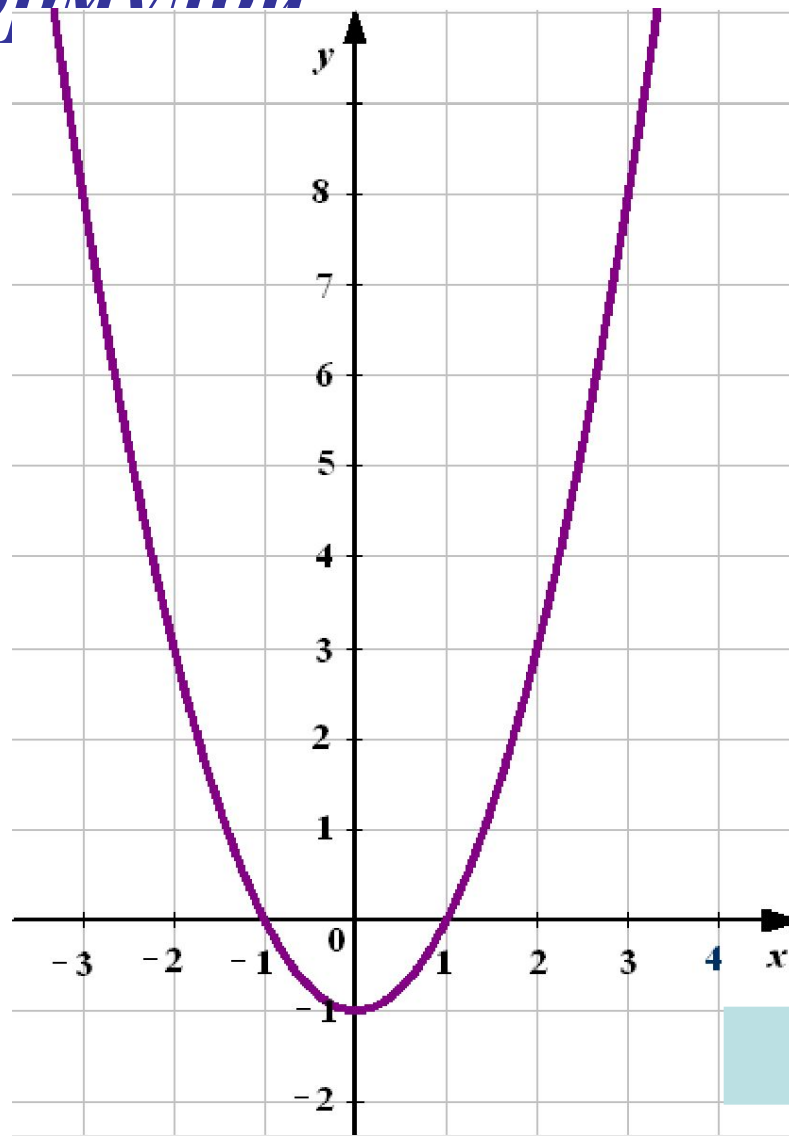
$$o = (\tilde{o} + 1)^2 + 1$$

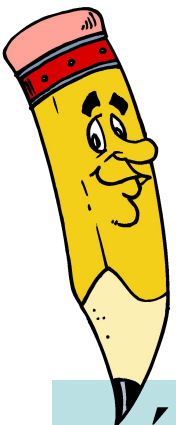
$$o = \tilde{o}^2 - 1$$

$$o = (\tilde{o} - 1)^2 + 1$$

$$o = -\tilde{o}^2 - 0,5$$

$$o = (\tilde{o} - 0,5)^2$$





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

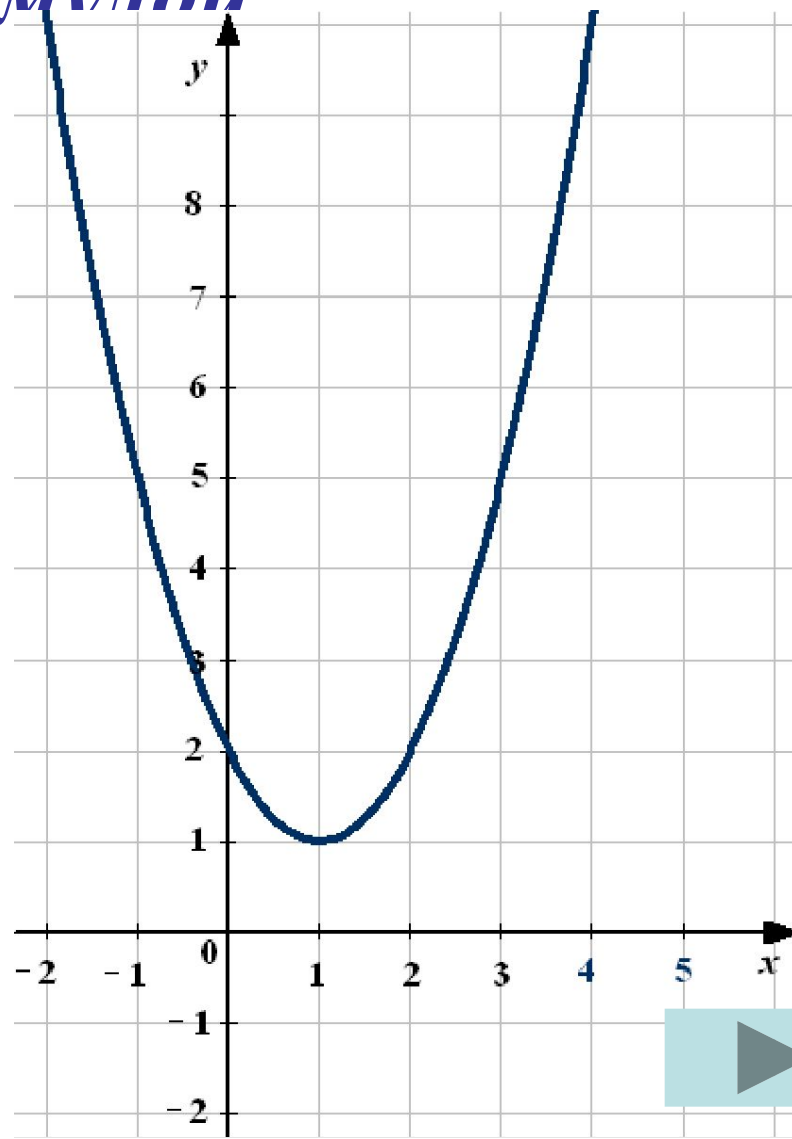
$$o = (\tilde{o} + 1)^2 + 1$$

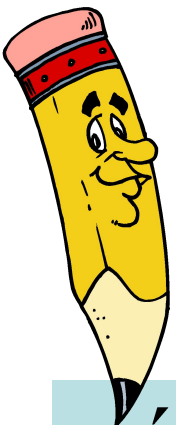
$$o = \tilde{o}^2 - 1$$

$$o = (\tilde{o} - 1)^2 + 1$$

$$o = -\tilde{o}^2 - 0,5$$

$$o = (\tilde{o} - 0,5)^2$$





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

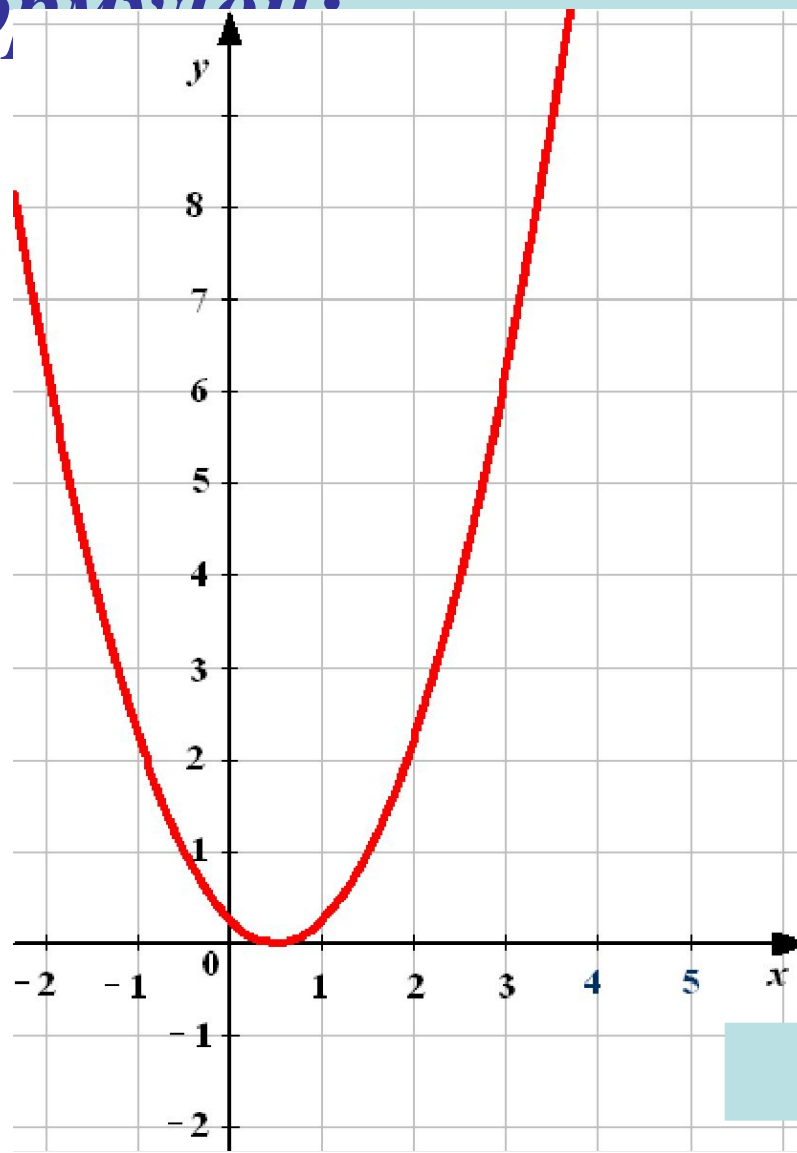
$$ó = (\tilde{o} + 1)^2 + 1$$

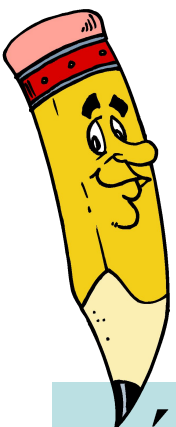
$$ó = \tilde{o}^2 - 1$$

$$ó = (\tilde{o} - 1)^2 + 1$$

$$ó = -\tilde{o}^2 - 0,5$$

$$ó = (\tilde{o} - 0,5)^2$$





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

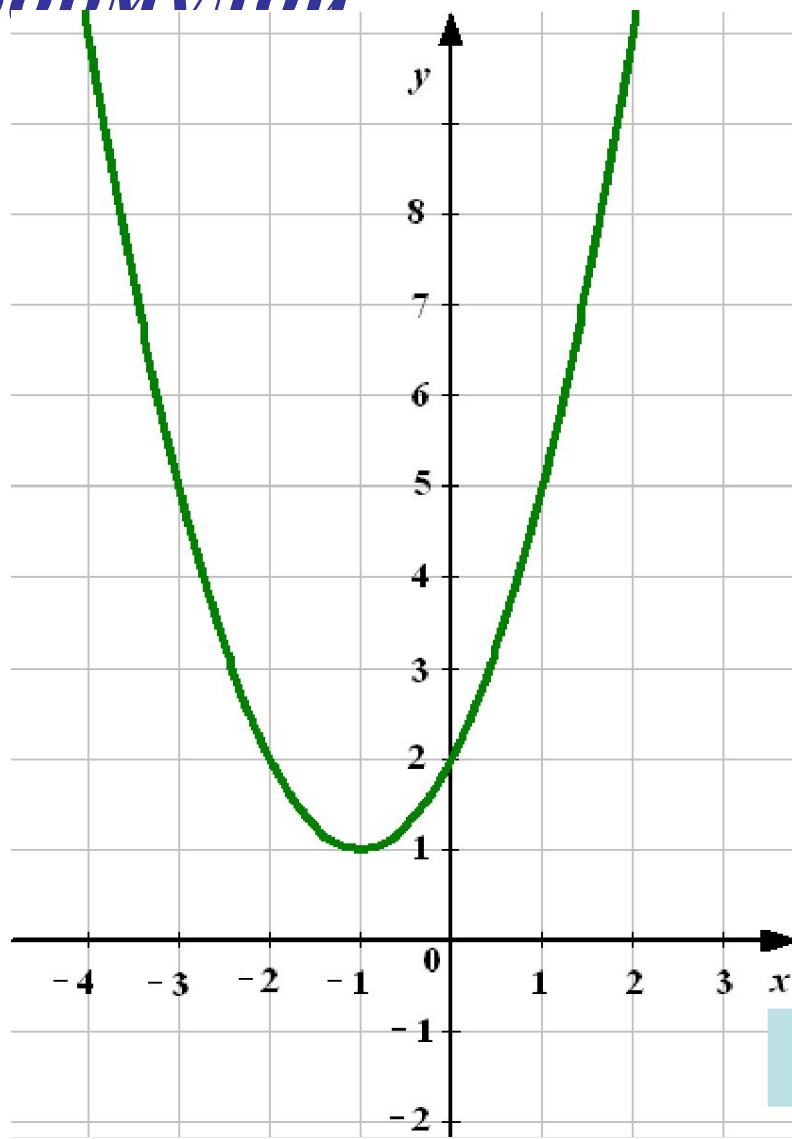
$$o = (\tilde{o} + 1)^2 + 1$$

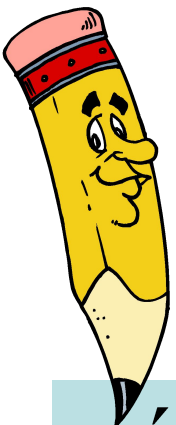
$$o = \tilde{o}^2 - 1$$

$$o = (\tilde{o} - 1)^2 + 1$$

$$o = -\tilde{o}^2 - 0,5$$

$$o = (\tilde{o} - 0,5)^2$$





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

$$o' = (\tilde{o} + 1)^2 + 1$$

$$o' = \tilde{o}^2 - 1$$

$$o' = (\tilde{o} - 1)^2 + 1$$

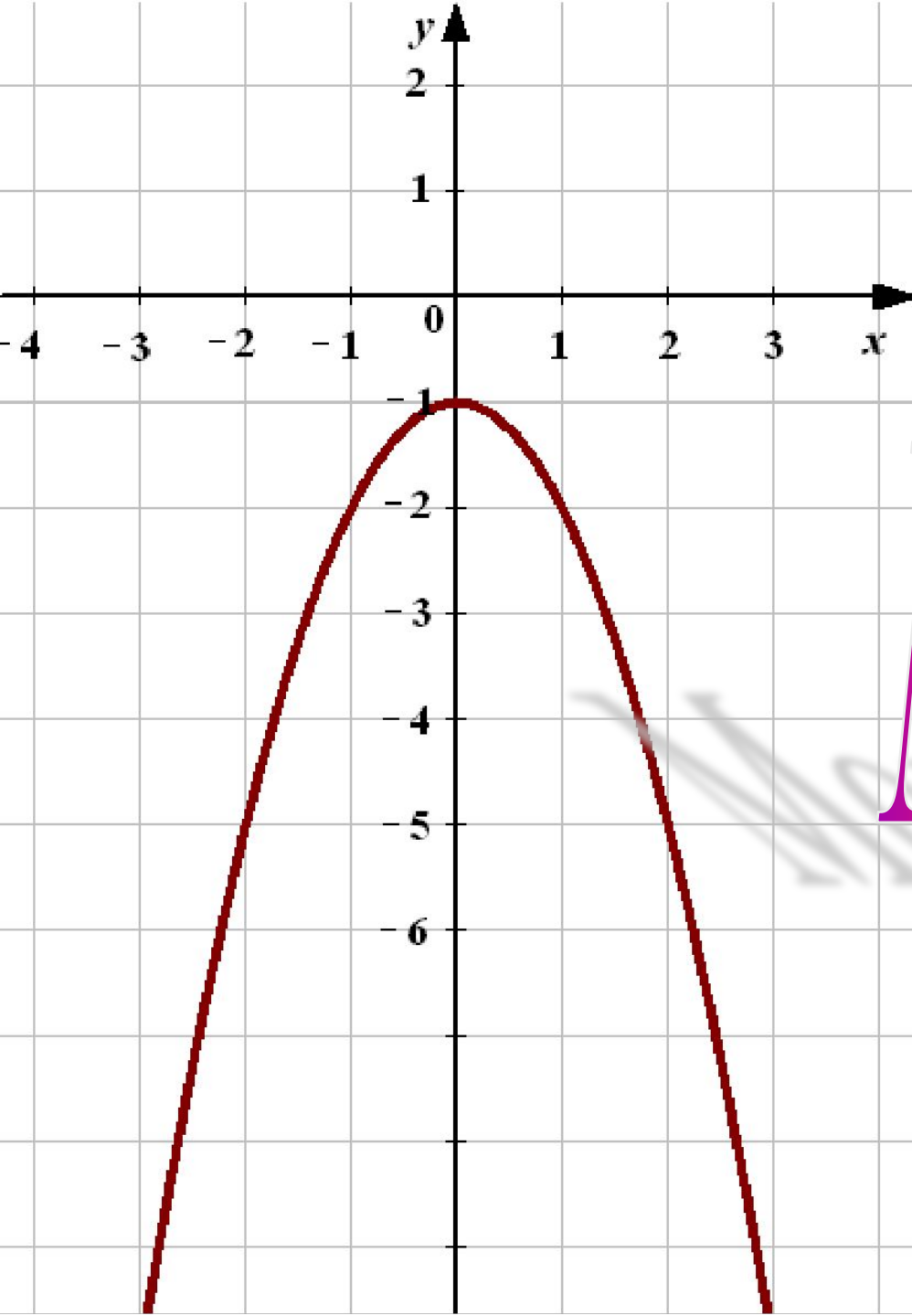
$$o' = -\tilde{o}^2 - 0,5$$

$$o' = (\tilde{o} - 0,5)^2$$

*График какой функции отсутствовал в задании?.*

*Самостоятельно построить график функции.*





Молодцы!

