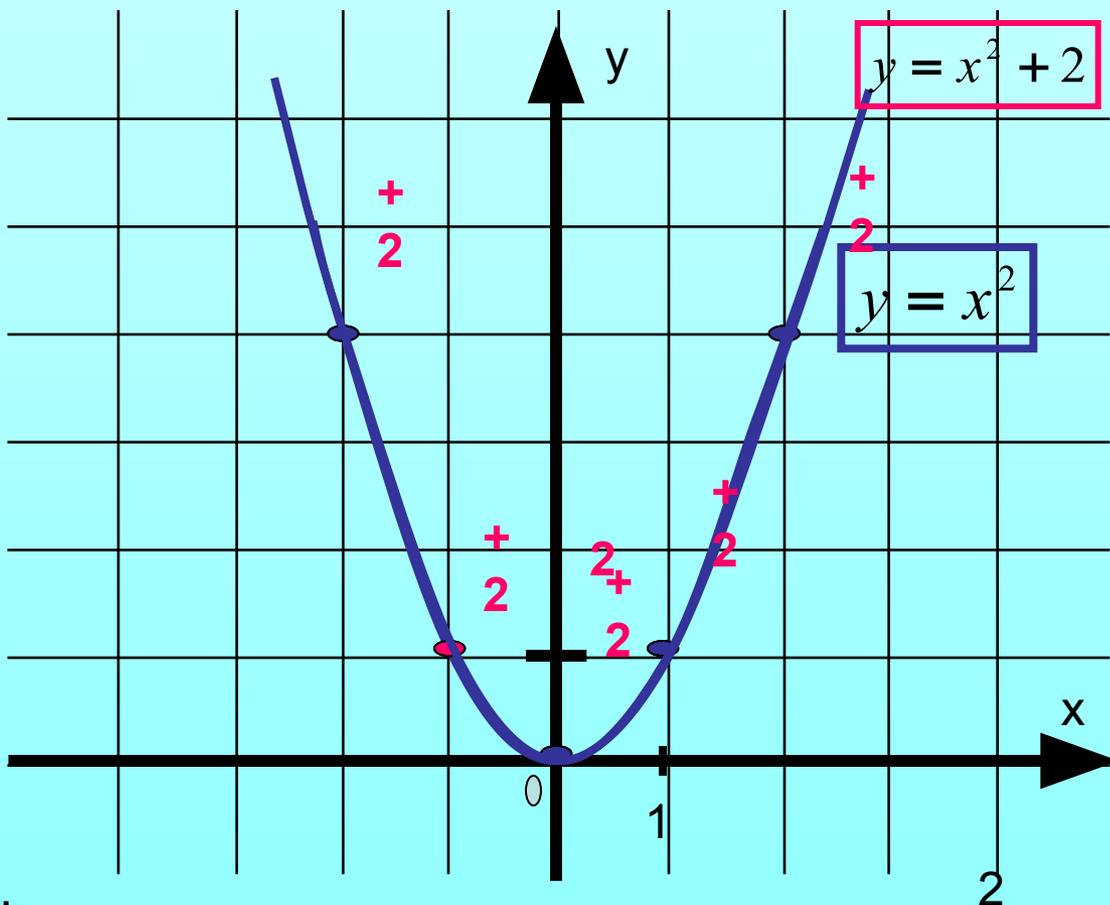


Простейшие преобразования графиков функций

Предмет: «Алгебра 8, 9 класс», «Алгебра и начала анализа 10 класс»

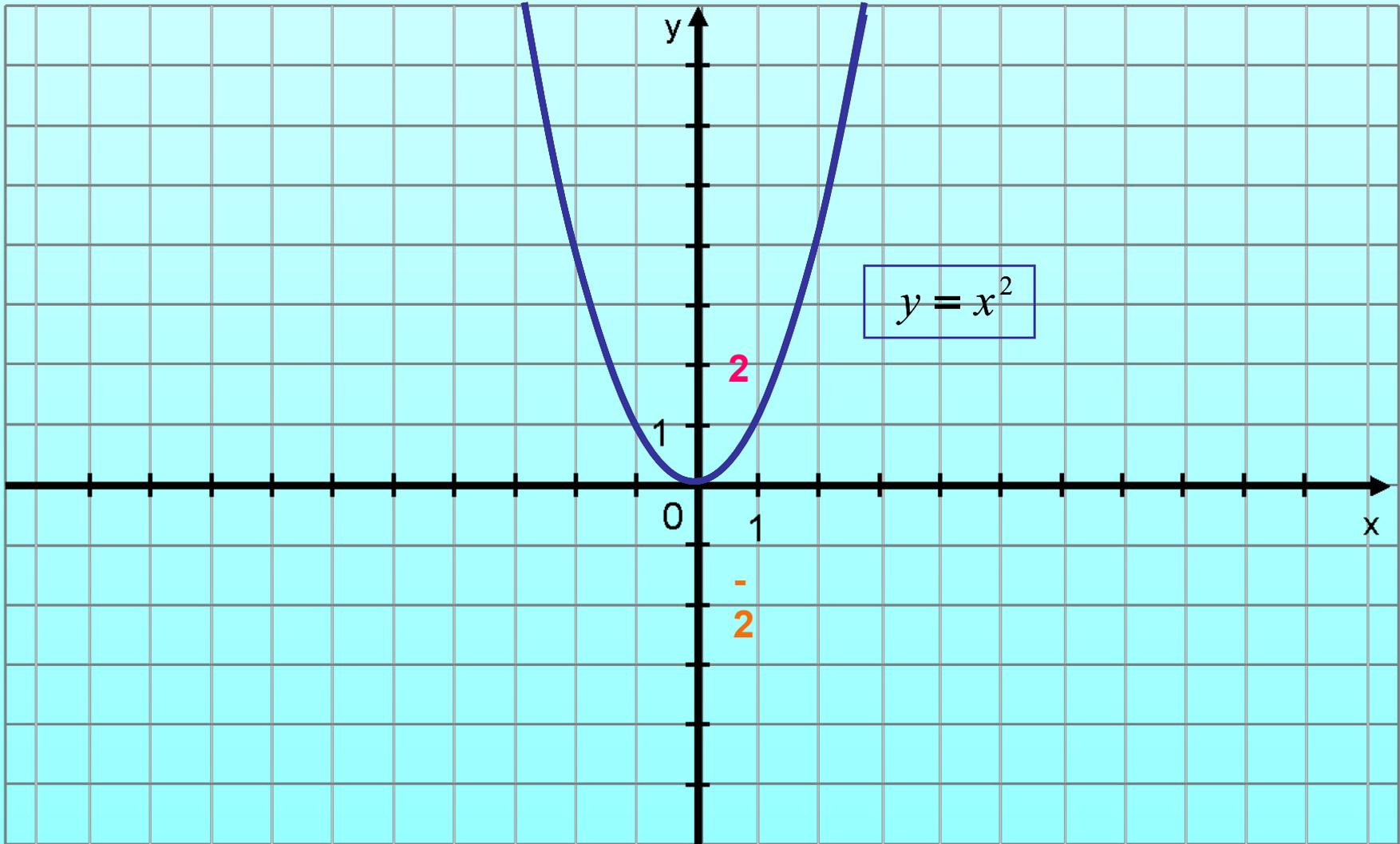
Автор учебно-методического материала:
учитель математики МОУ гимназия №1 г.о. Шуя
Мирскова Елена Венеровна

| | | | | | |
|-----------|----|----|---|---|---|
| x | -2 | -1 | 0 | 1 | 2 |
| x^2 | 4 | 1 | 0 | 1 | 4 |
| $x^2 + 2$ | 6 | 3 | 2 | 3 | 6 |



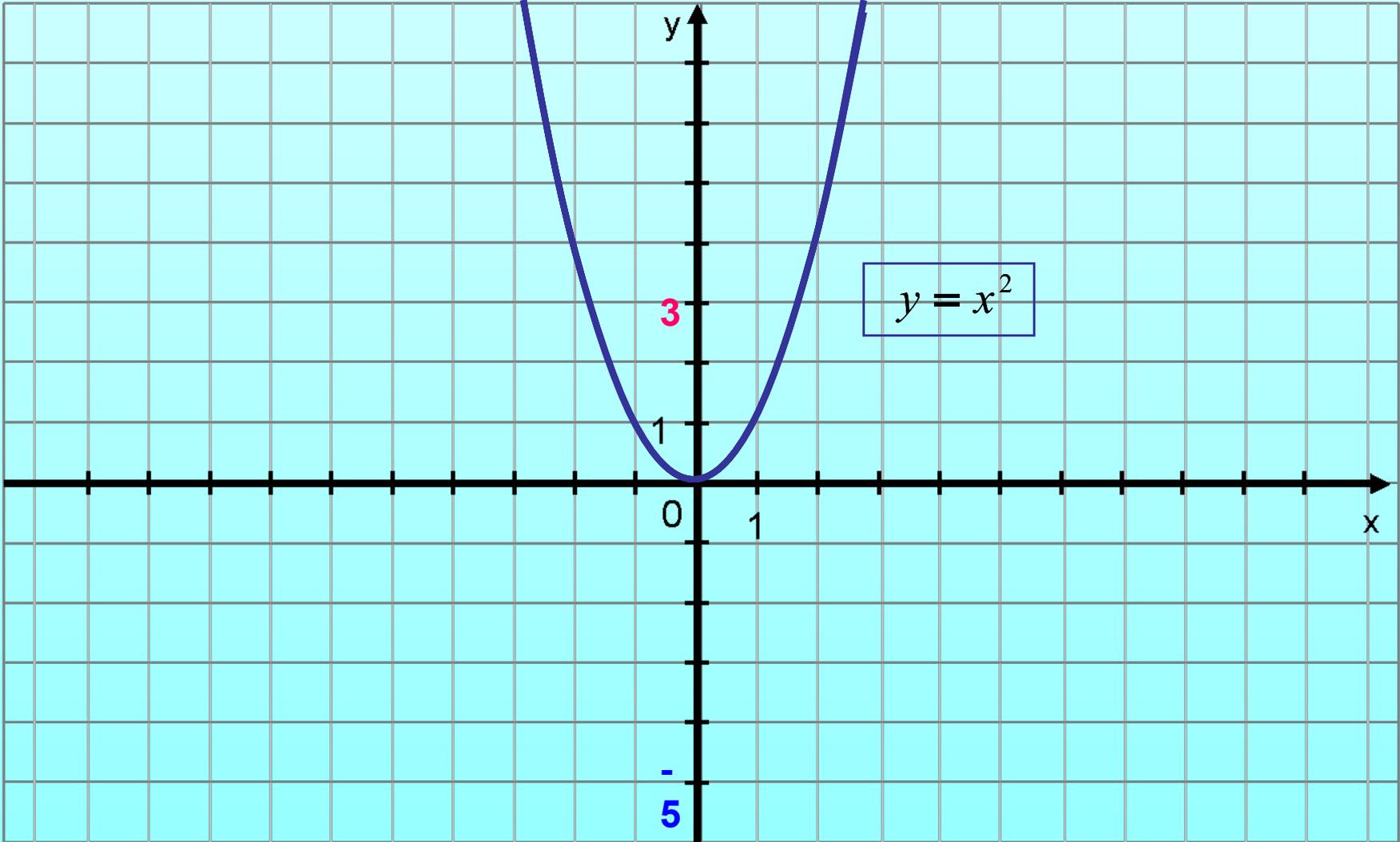
$$y = x^2 + 2$$

$$y = x^2 - 2$$

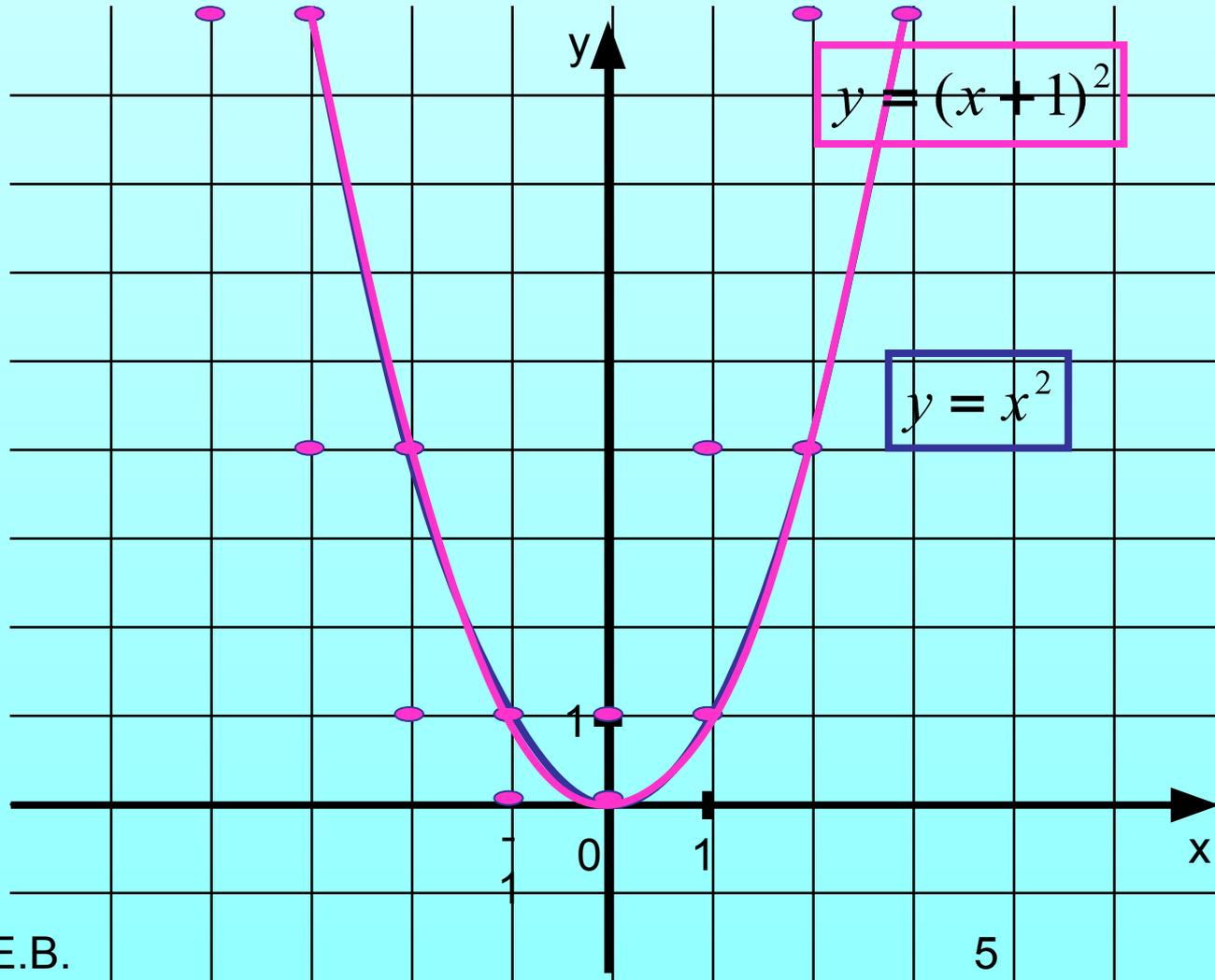


$$y = x^2 + 3$$

$$y = x^2 - 5$$

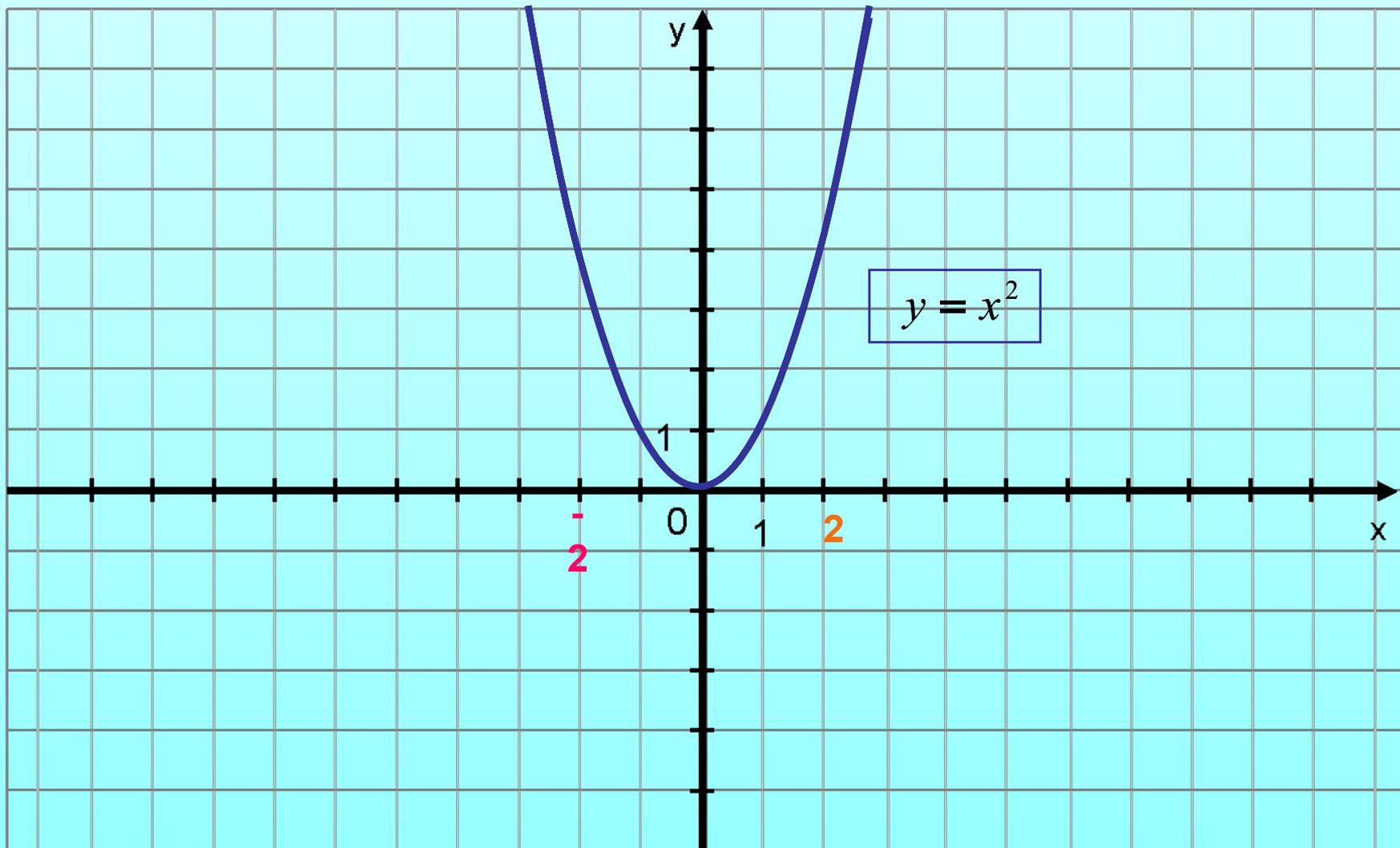


| | | | | | | | | |
|-----------|----|----|----|----|---|---|---|----|
| x | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| x^2 | 16 | 9 | 4 | 1 | 0 | 1 | 4 | 9 |
| $(x+1)^2$ | 9 | 4 | 1 | 0 | 1 | 4 | 9 | 16 |



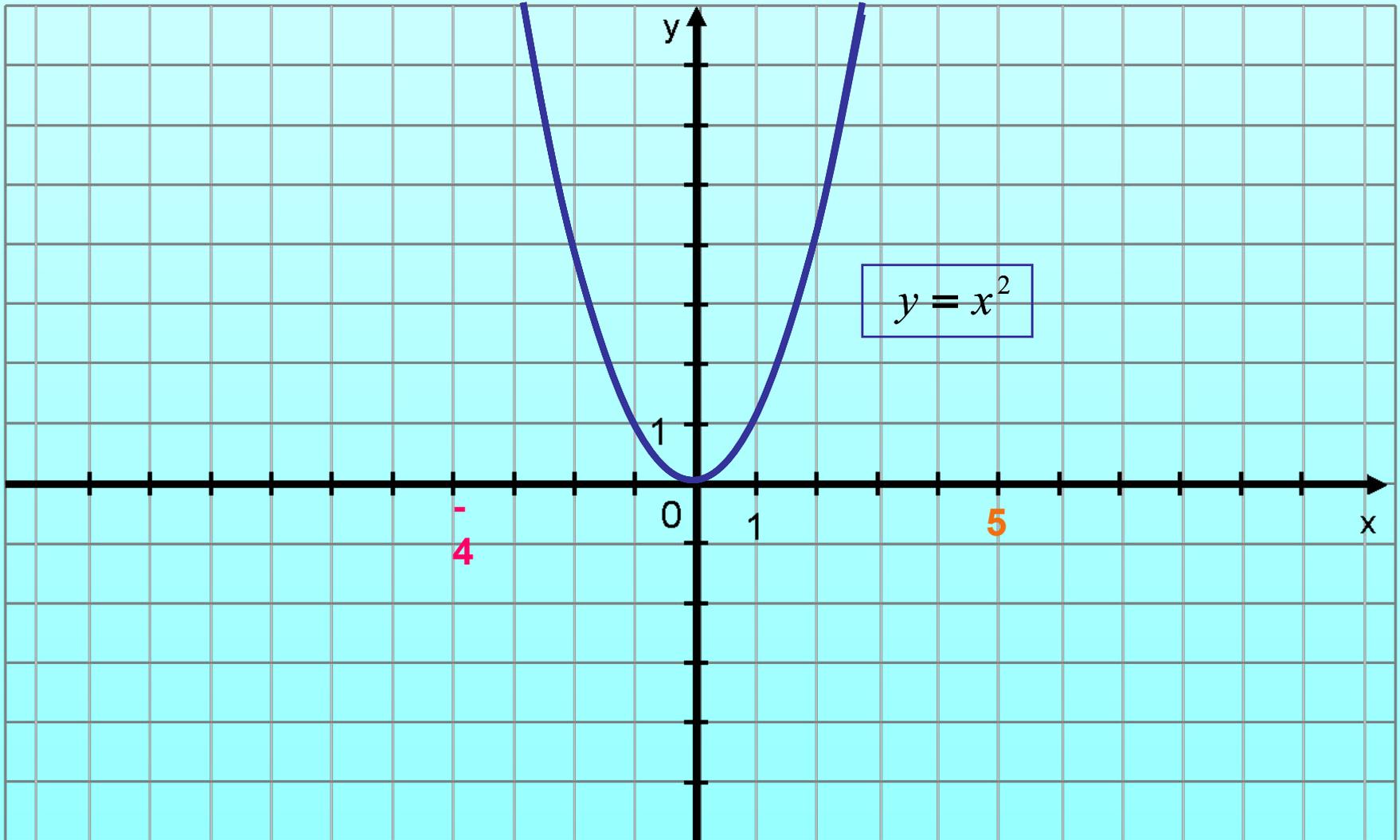
$$y = (x + 2)^2$$

$$y = (x - 2)^2$$



$$y = (x + 4)^2$$

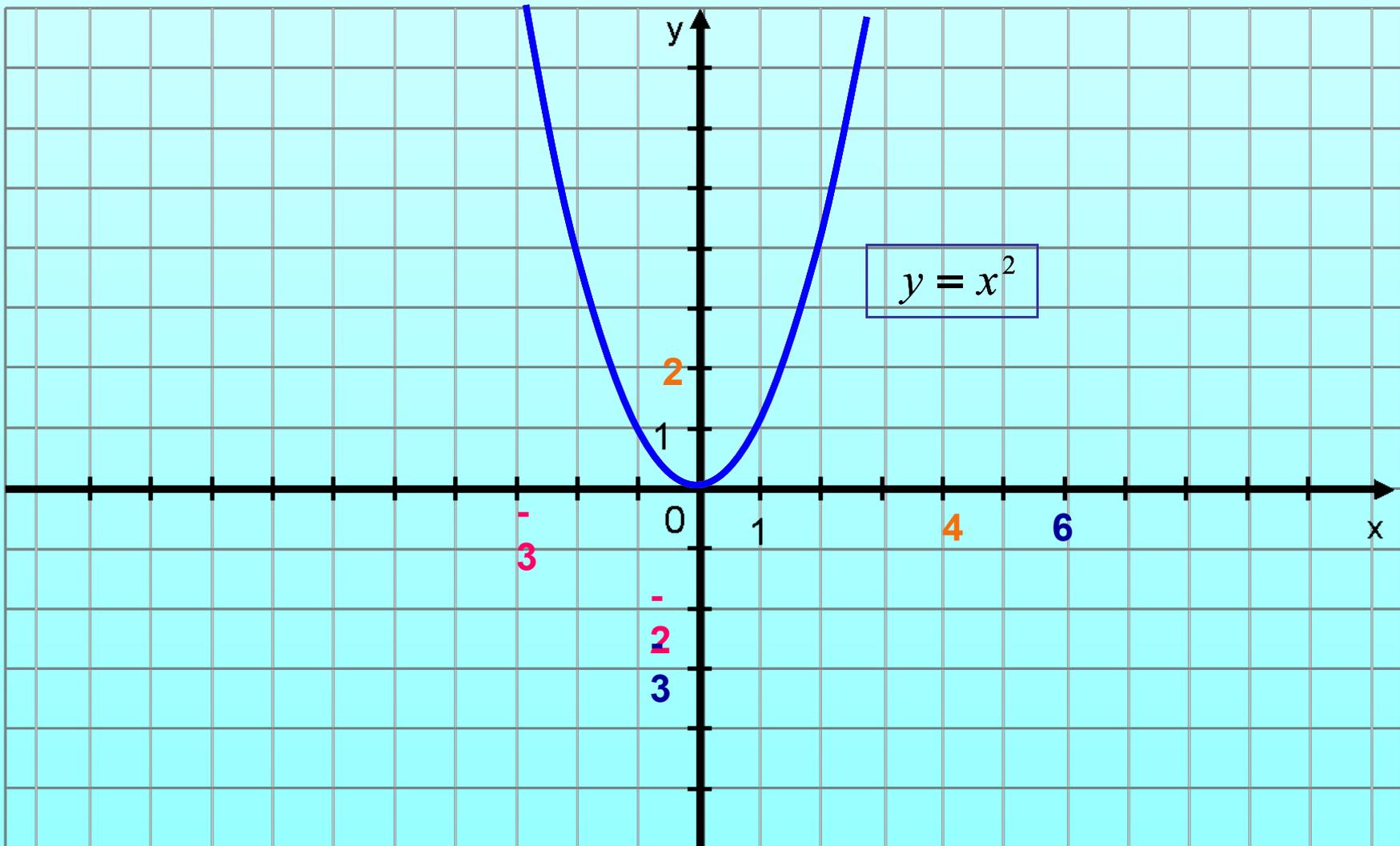
$$y = (x - 5)^2$$



$$y = (x + 3)^2 - 2$$

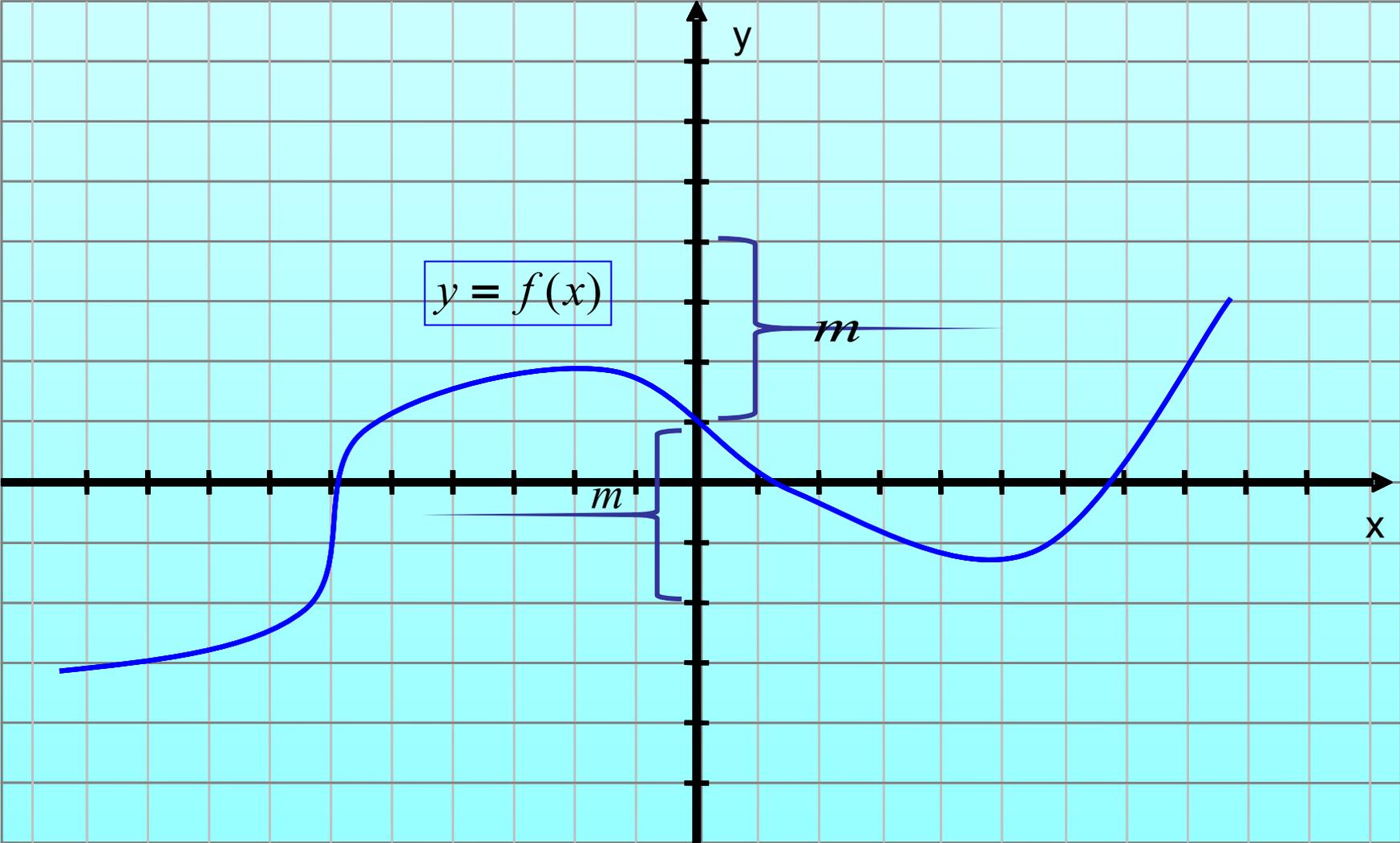
$$y = (x - 4)^2 + 2$$

$$y = (x - 6)^2 - 3$$



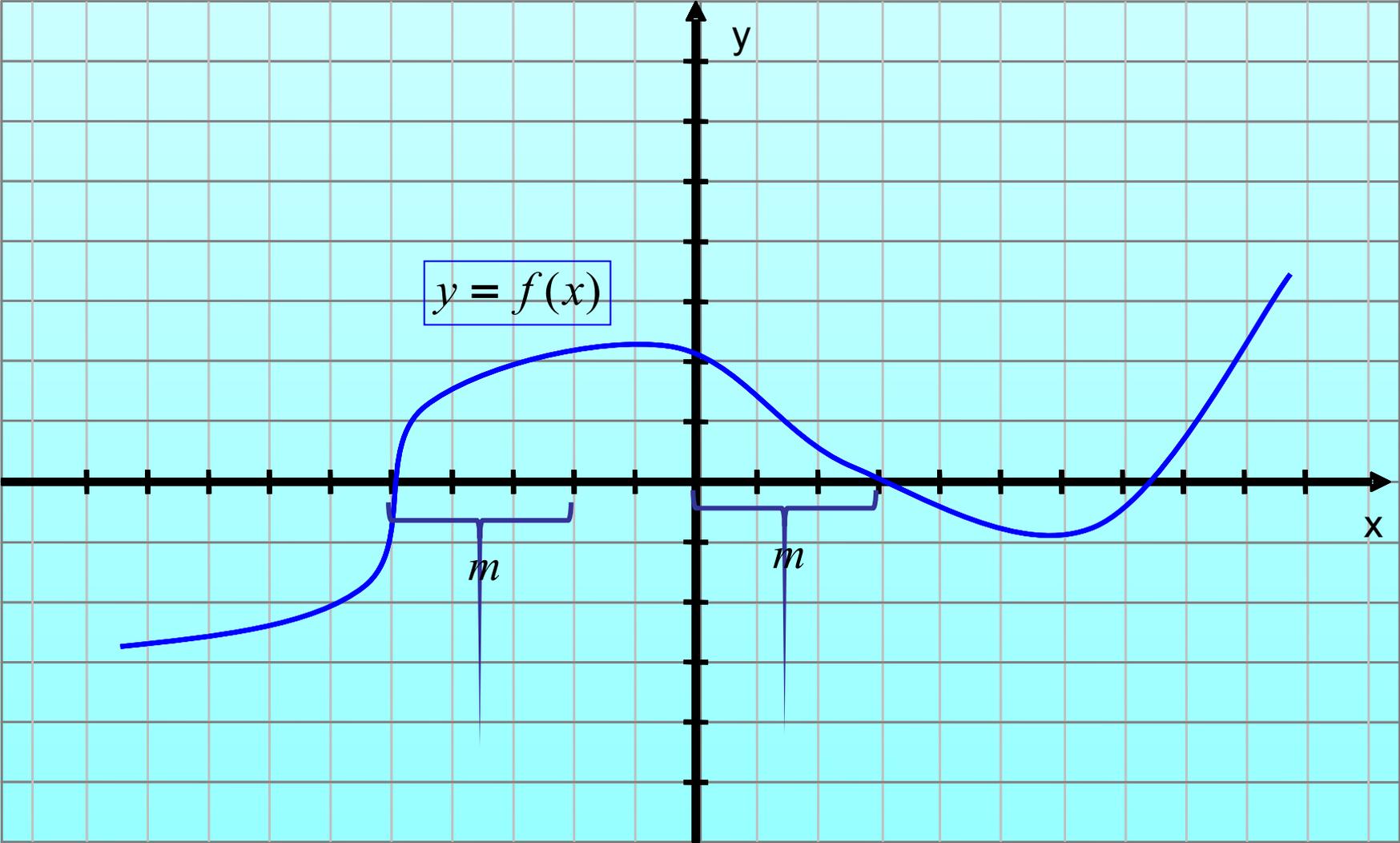
$$y = f(x) + m$$

$$y = f(x) - m$$



$$y = f(x + m)$$

$$y = f(x - m)$$

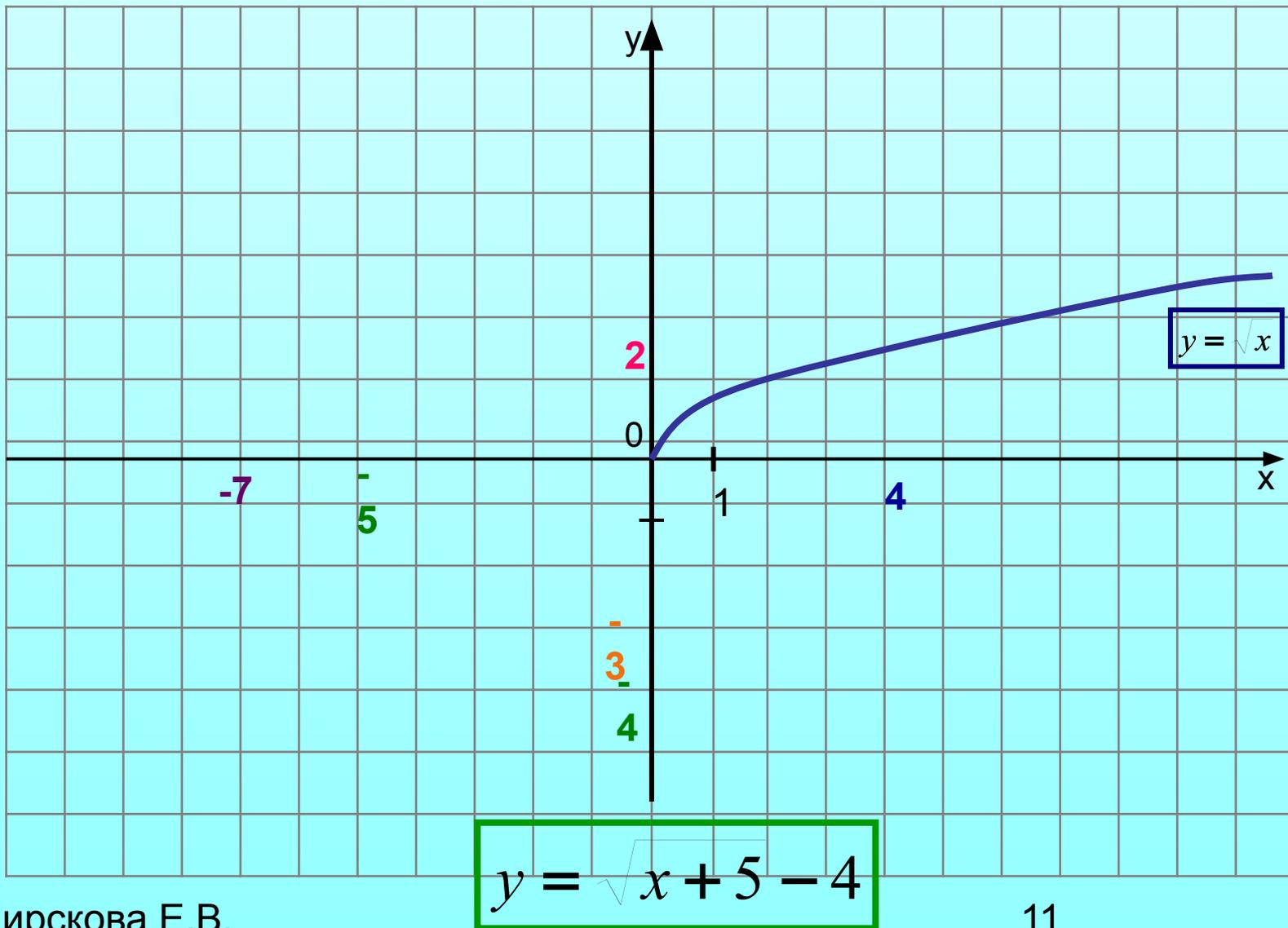


$$y = \sqrt{x + 2}$$

$$y = \sqrt{x - 3}$$

$$y = \sqrt{x - 4}$$

$$y = \sqrt{x + 7}$$

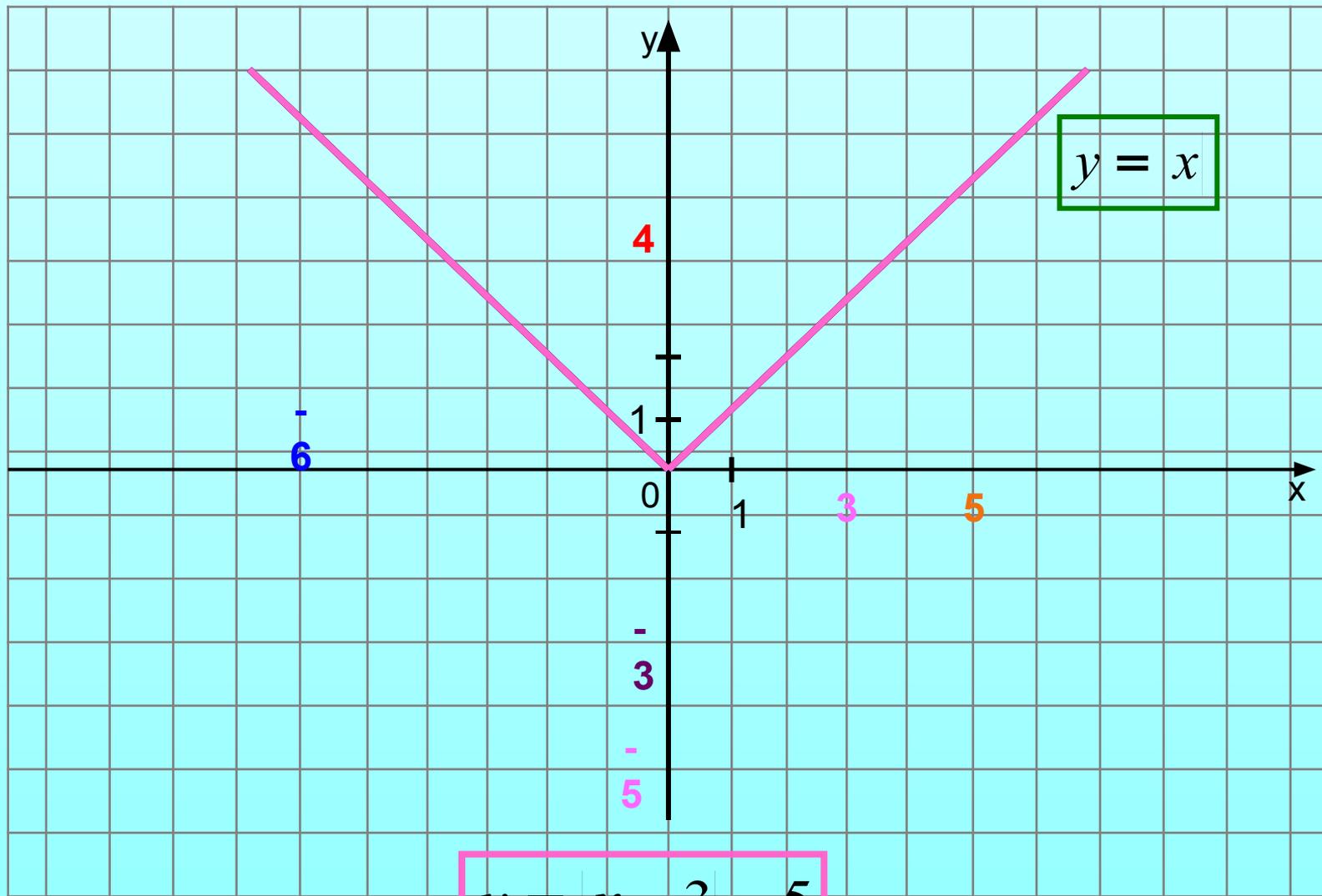


$$y = |x - 3|$$

$$y = |x + 4|$$

$$y = |x - 5|$$

$$y = |x + 6|$$



$$y = |x - 3| - 5$$