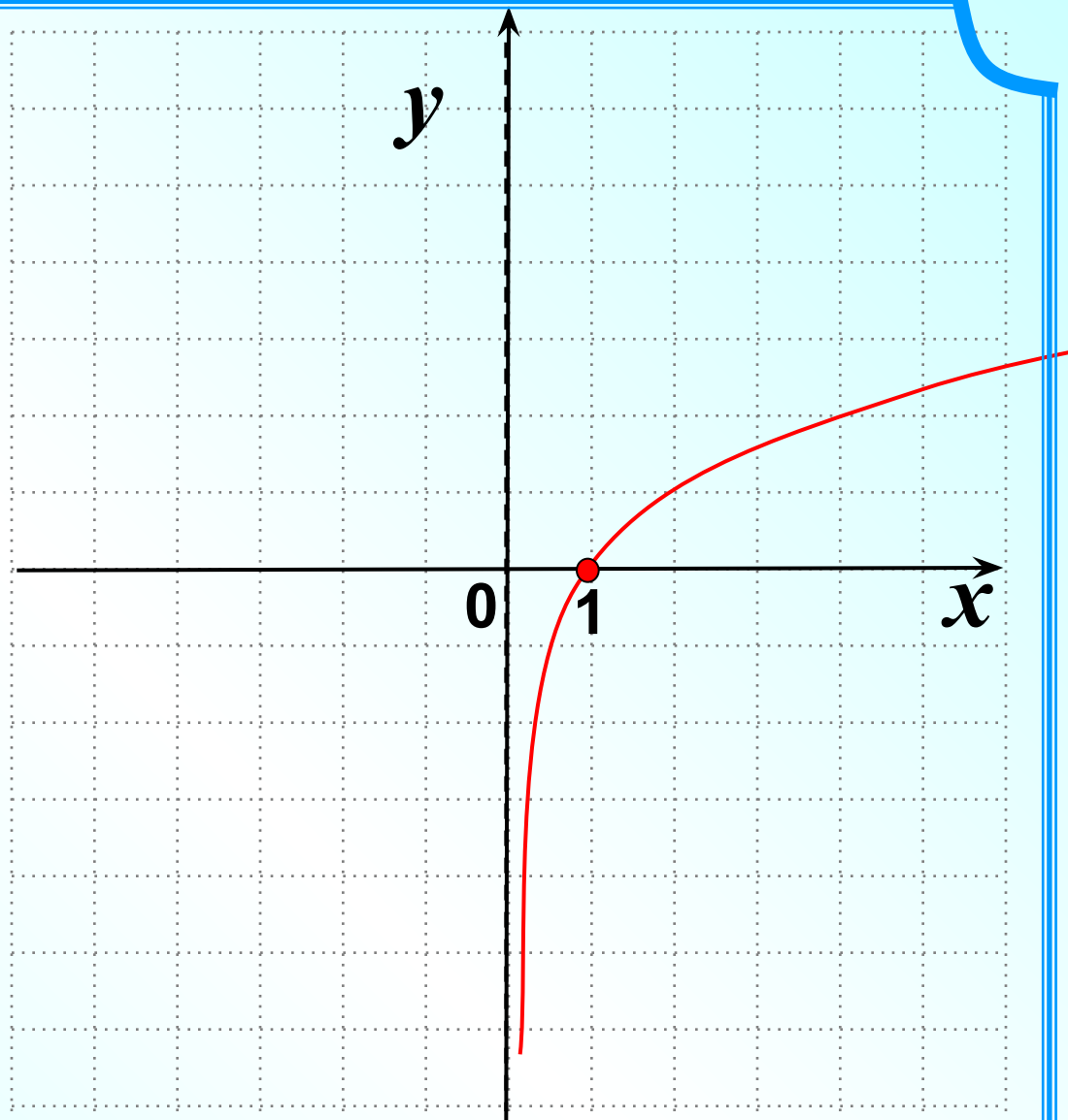


**Логарифмическая
функция
Преобразования
графиков**

$$y = \log_2(x-2)$$

$$D(y) : x > 2$$

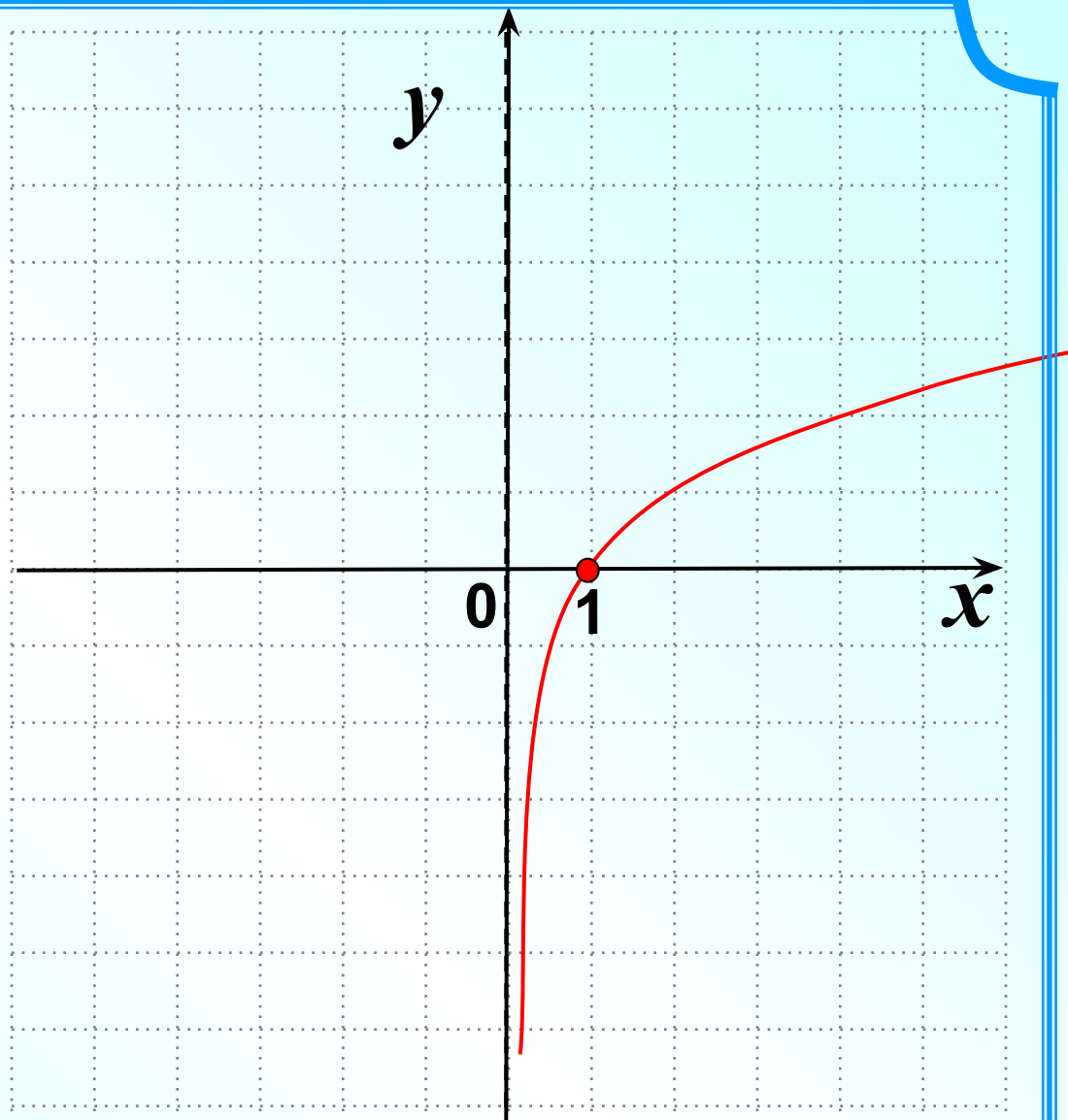
$$E(y) : y \in \mathbb{R}$$



$$y = \log_2(x+4)$$

$$D(\log) : x > -4$$

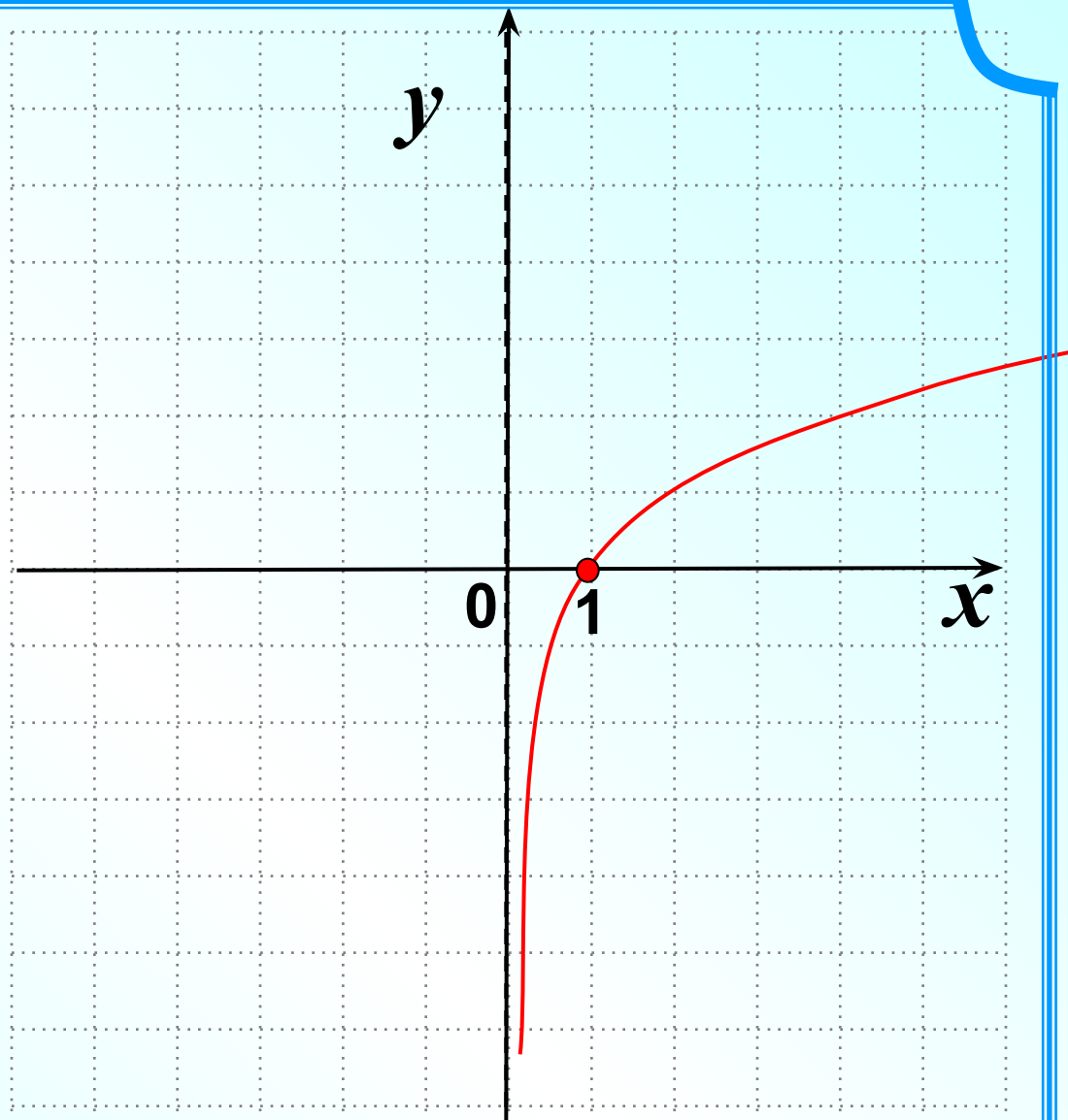
$$E(y) : y \in \mathbb{R}$$



$$y = \log_2(x+2)$$

$$D(g) : x > 0$$

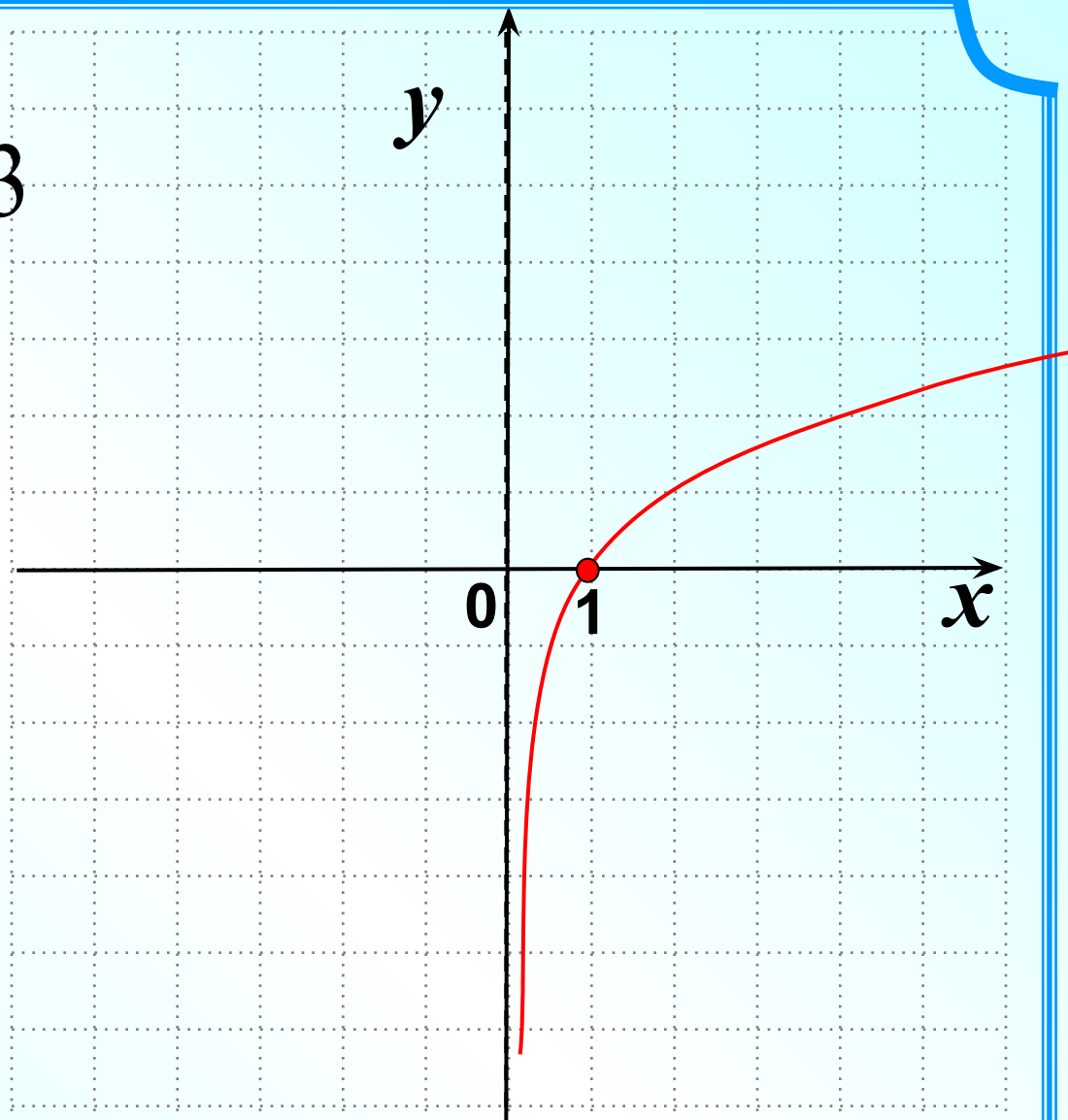
$$E(y) : y \in \mathbb{R}$$



$$y = \log_2(x + 4) + 3$$

$$D(y) : x > -4$$

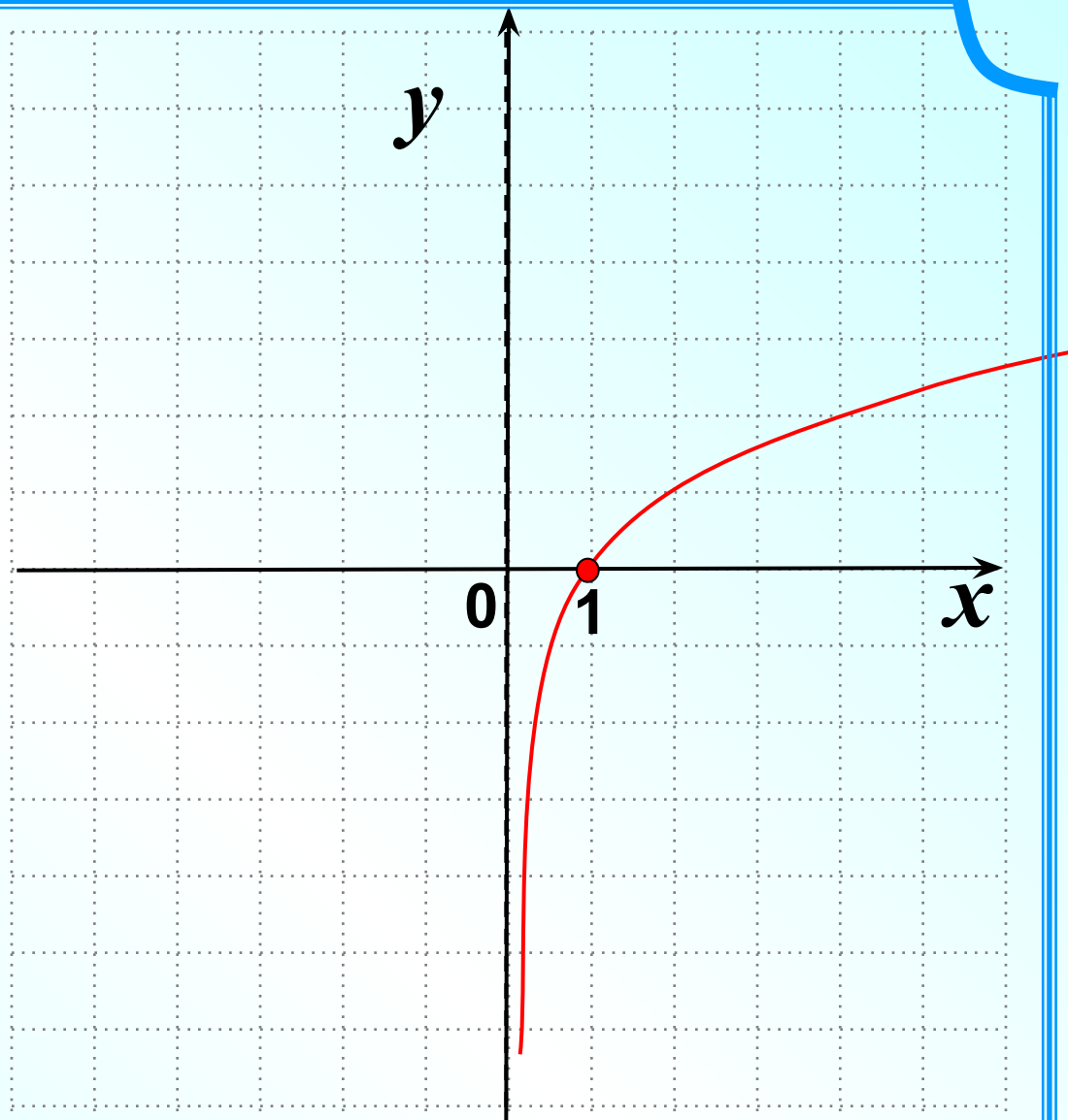
$$E(y) : y \in \mathbb{R}$$



$$y = \log_2 x - 2$$

$$D(g) : x > 0$$

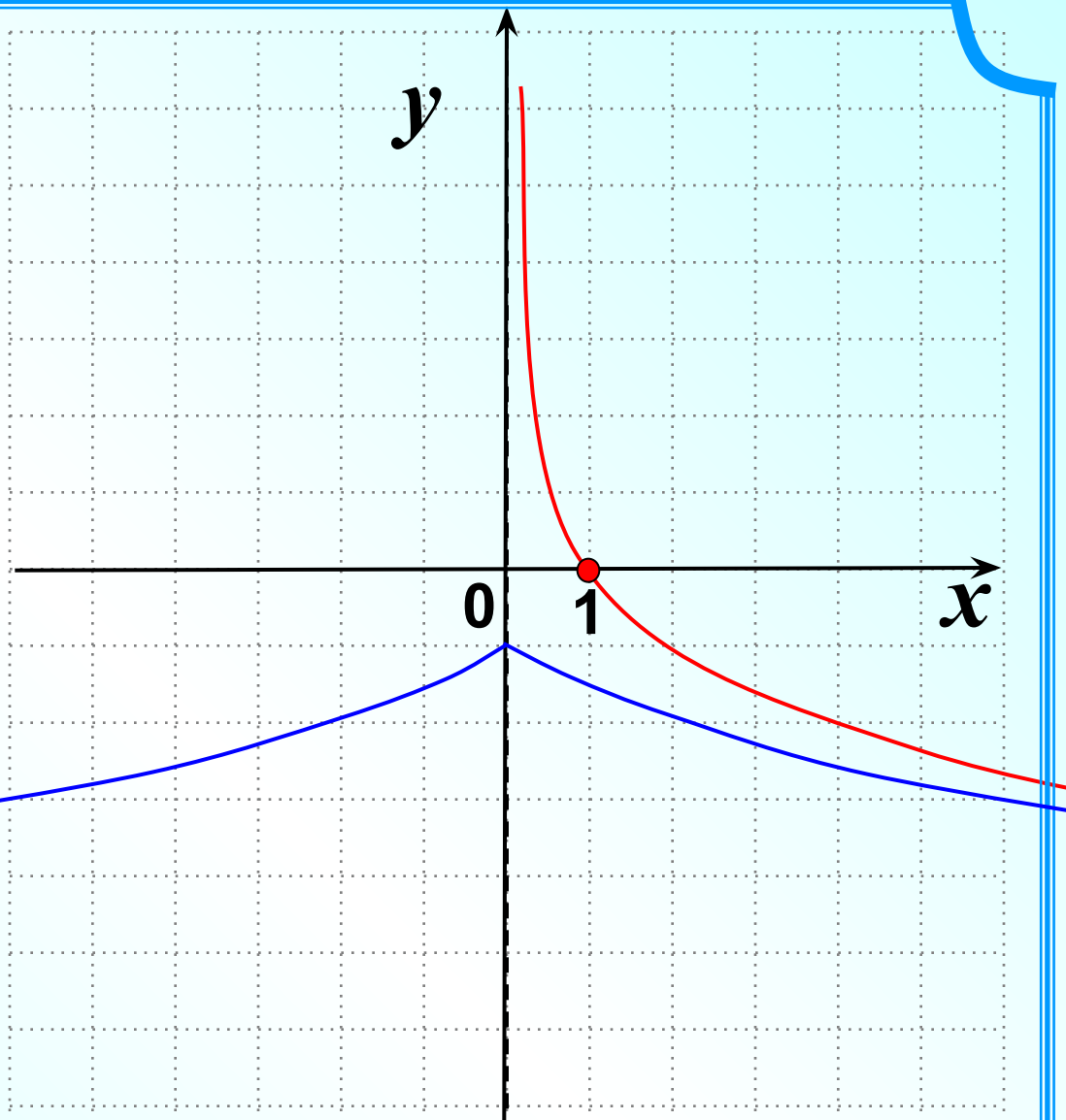
$$E(y) : y \in \mathbb{R}$$



$$y = \log_{\frac{1}{2}}(|x| + 2)$$

$$D(y) : x \in \mathbb{R}$$

$$E(y) : y \leq -1$$

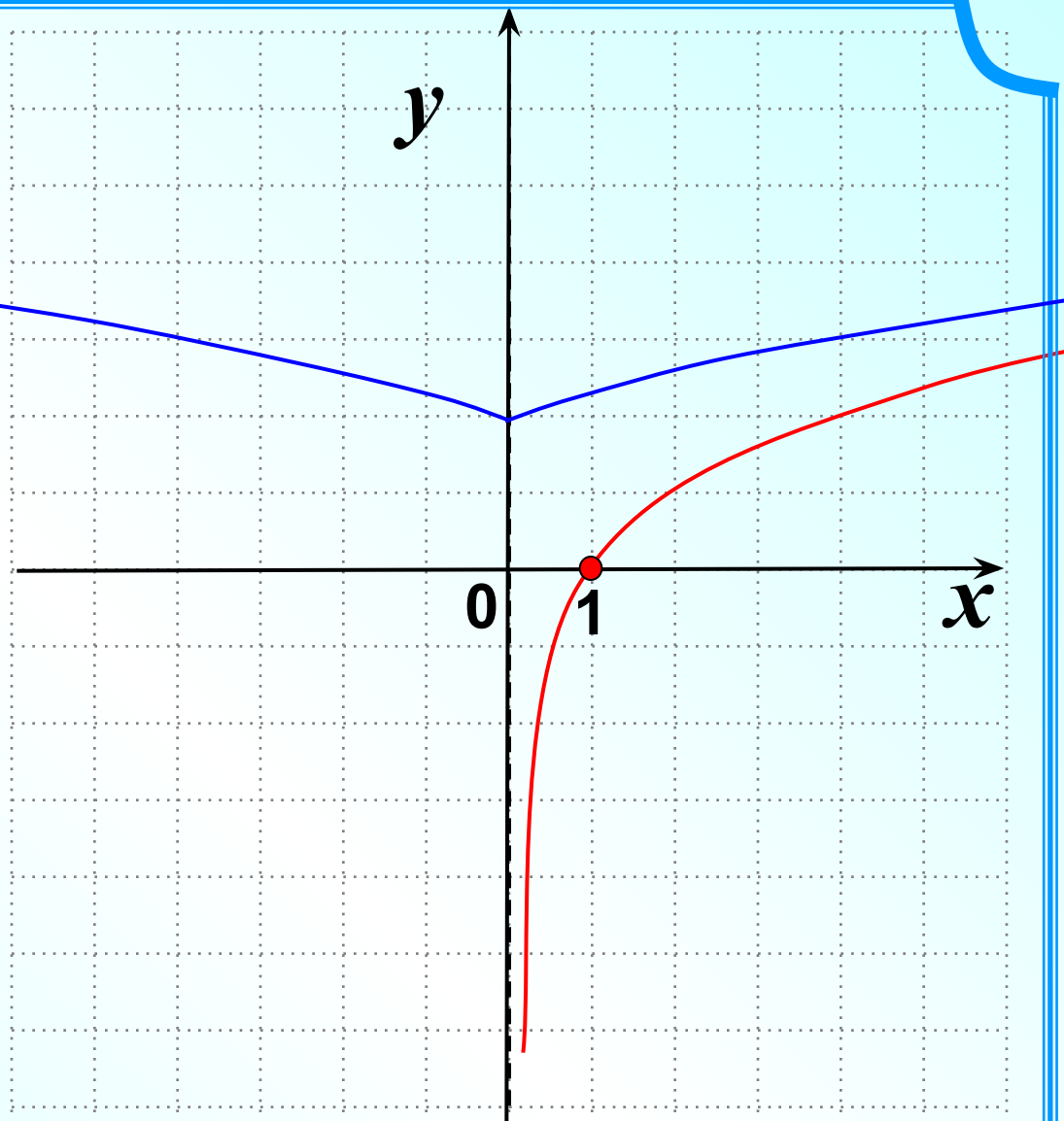


$$y = \log_{\frac{1}{2}}(|x| + 2)$$

$$y = \log_2(|x| + 4)$$

$$D(y) : x \in \mathbb{R}$$

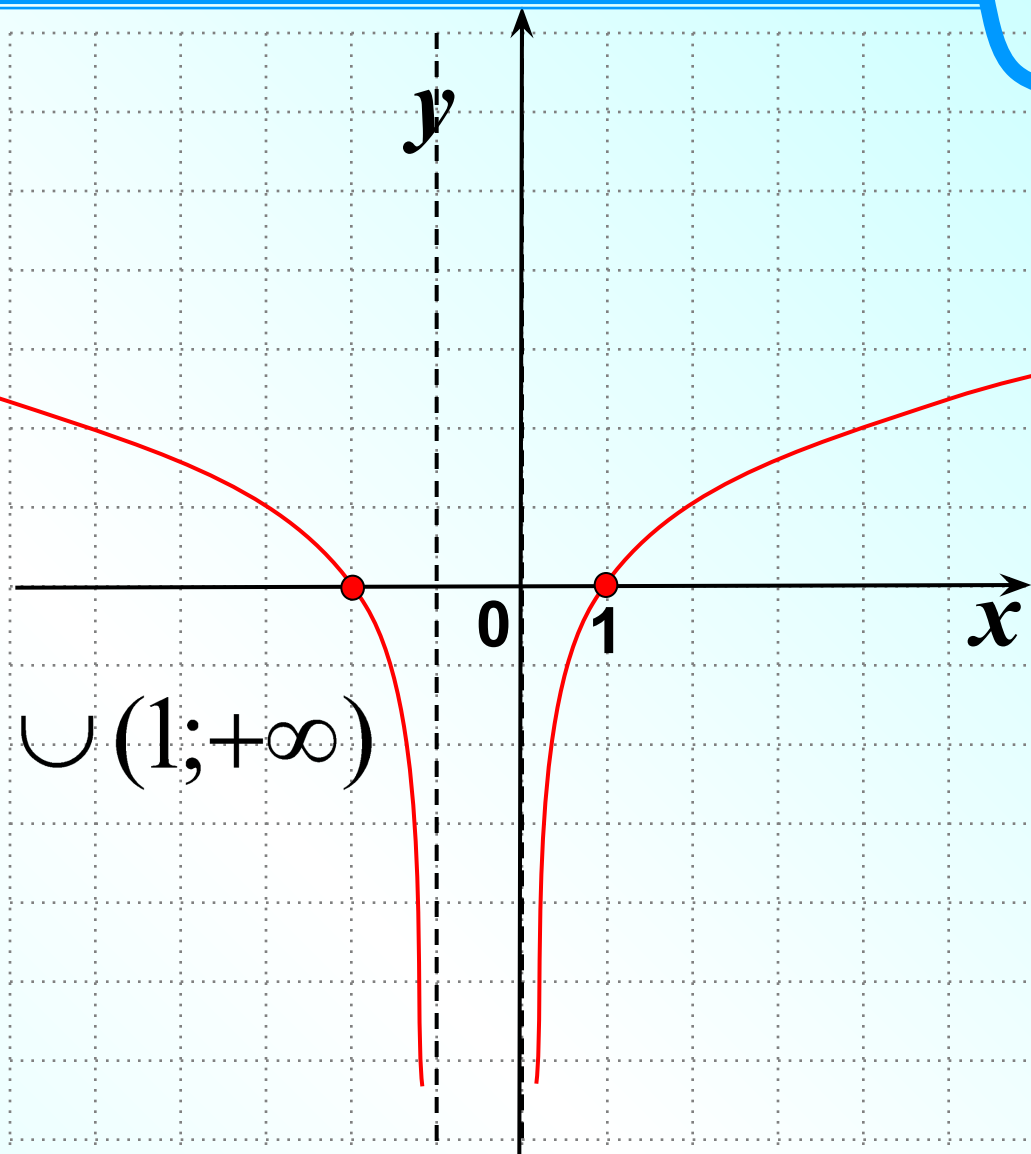
$$E(y) : y \geq 2$$



$$y = \log_2(|x| + 4)$$

$$y = \log_2(|x| - 1)$$

g



$$D(y) : x \in (-\infty; -1) \cup (1; +\infty)$$

$$E(y) : y \in R$$

$$y = \log_2(|x| - 1)$$

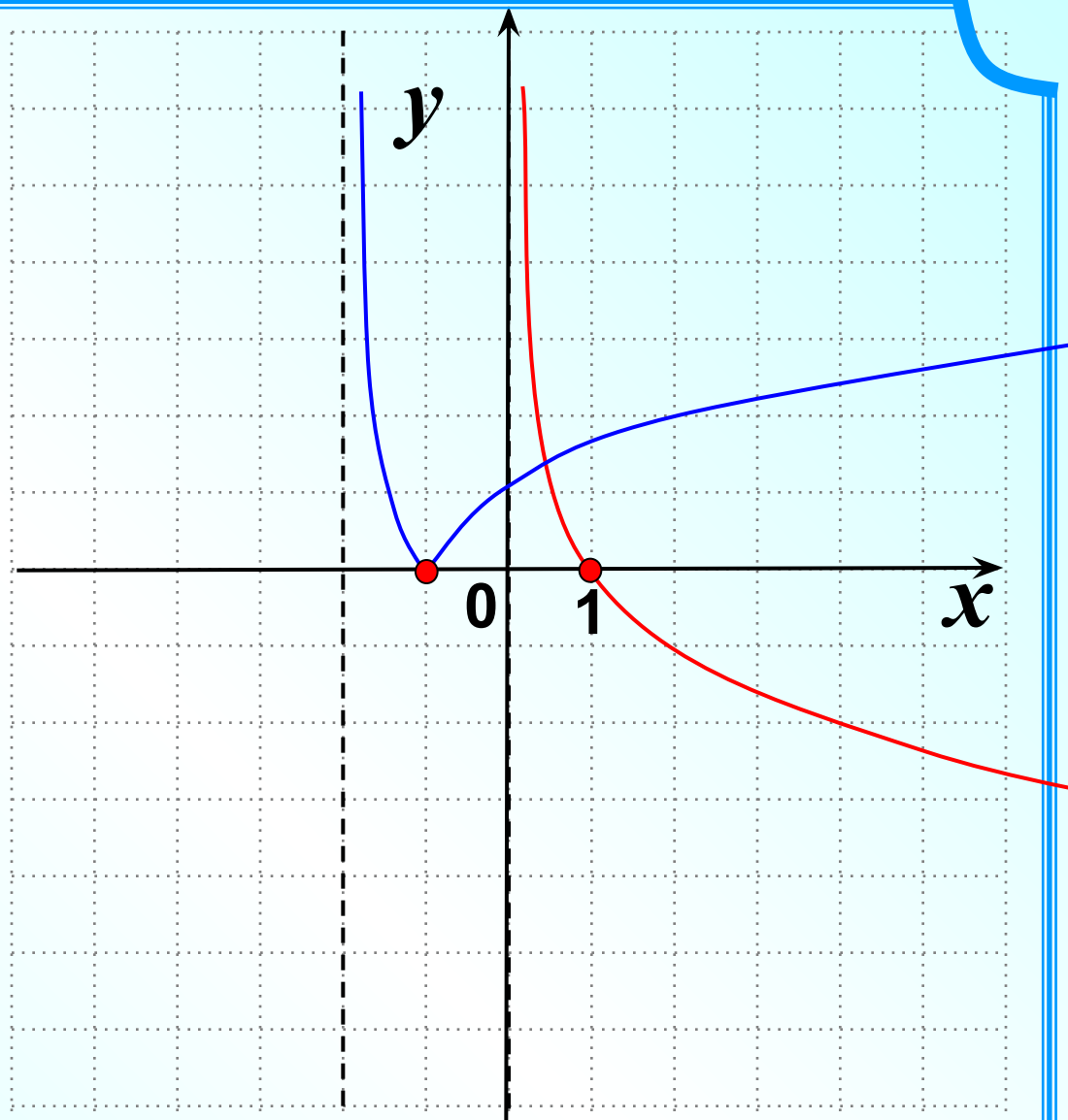
g

Симметрия относительно оси ординат.

$$y = \left| \log_{\frac{1}{2}}(x + 2) \right|$$

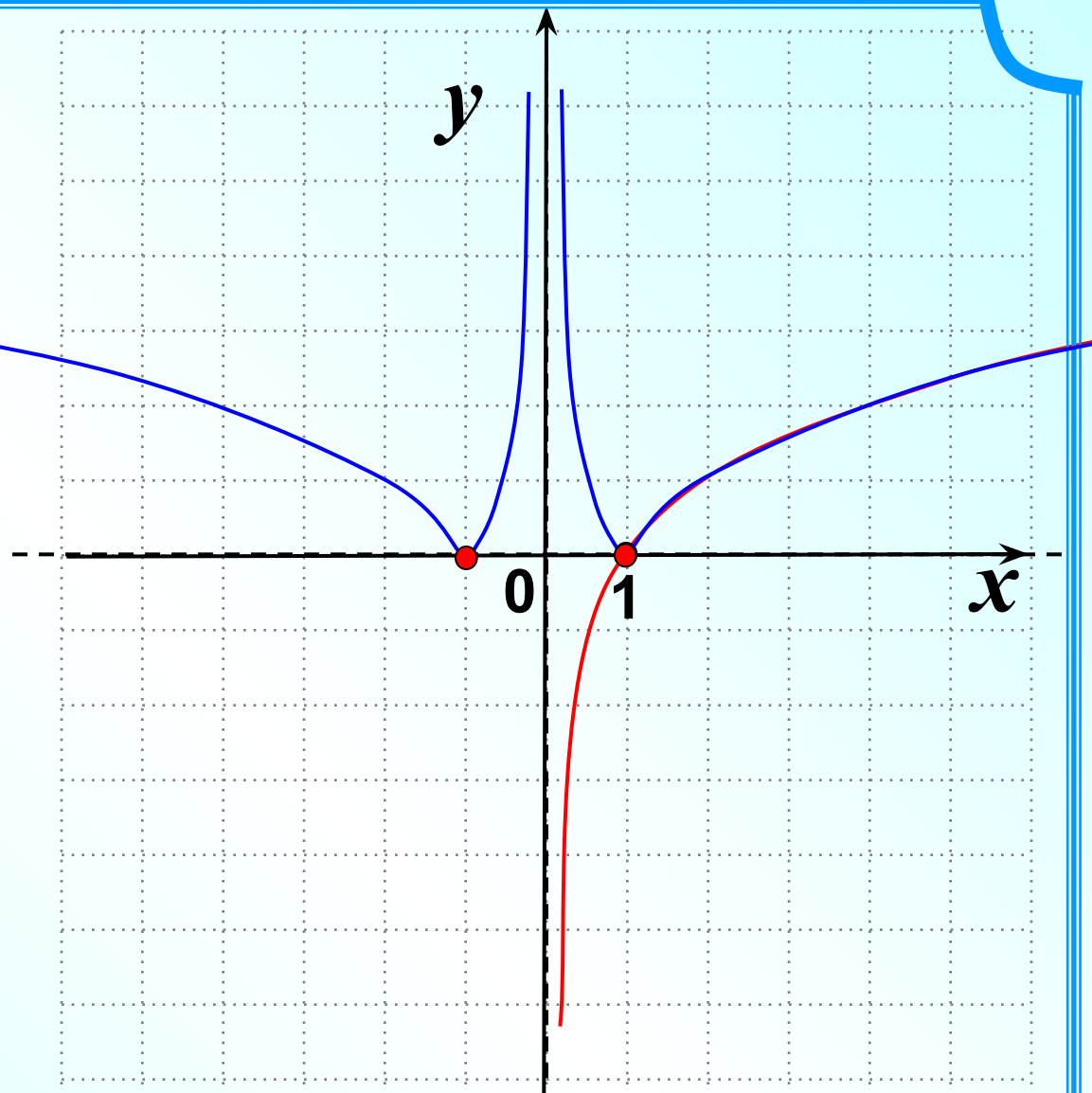
$$D(y) : x > -2$$

$$E(y) : y \geq 0$$



Симметрия относительно оси абсцисс.

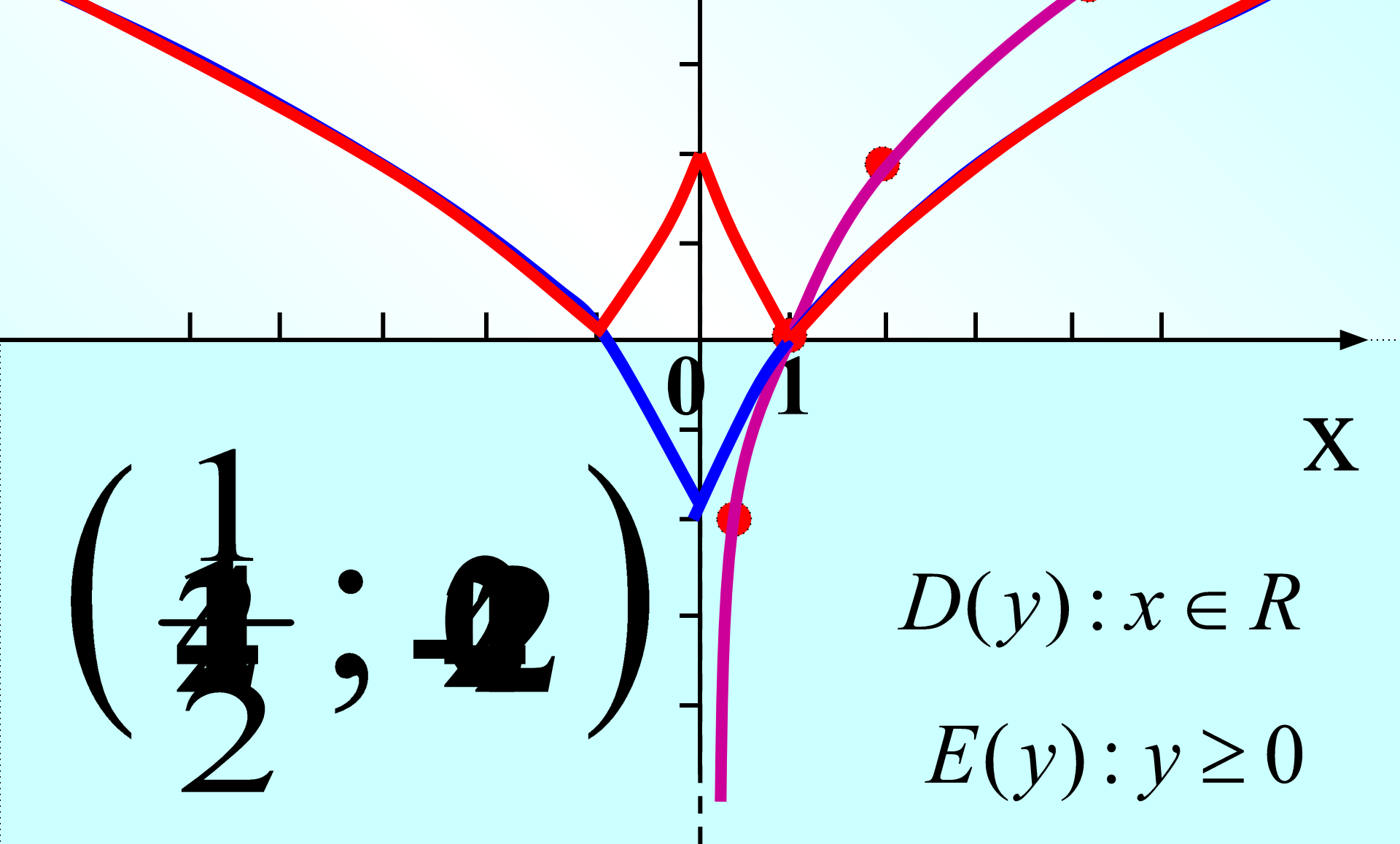
$$y = |\log_2 |x|| - 2$$



$$D(y) : x \neq 0$$

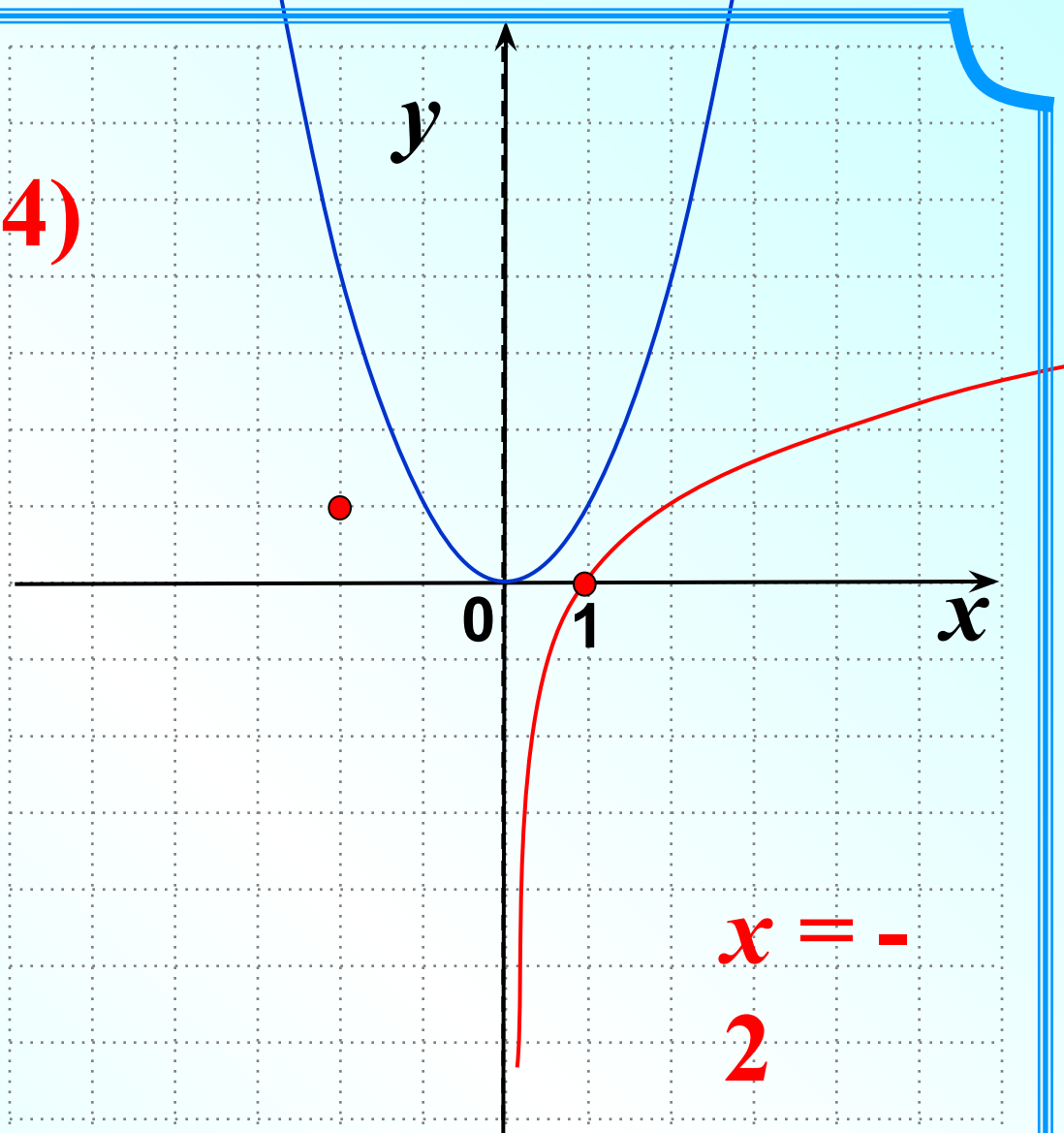
$$E(y) : y \geq -2$$

$$y = |2 \log_2(|x| + 1) - 2|$$



Решить уравнение

$$(x + 3)^2 = \log_2(x + 4)$$



$x = -$

2

$x = -$

3

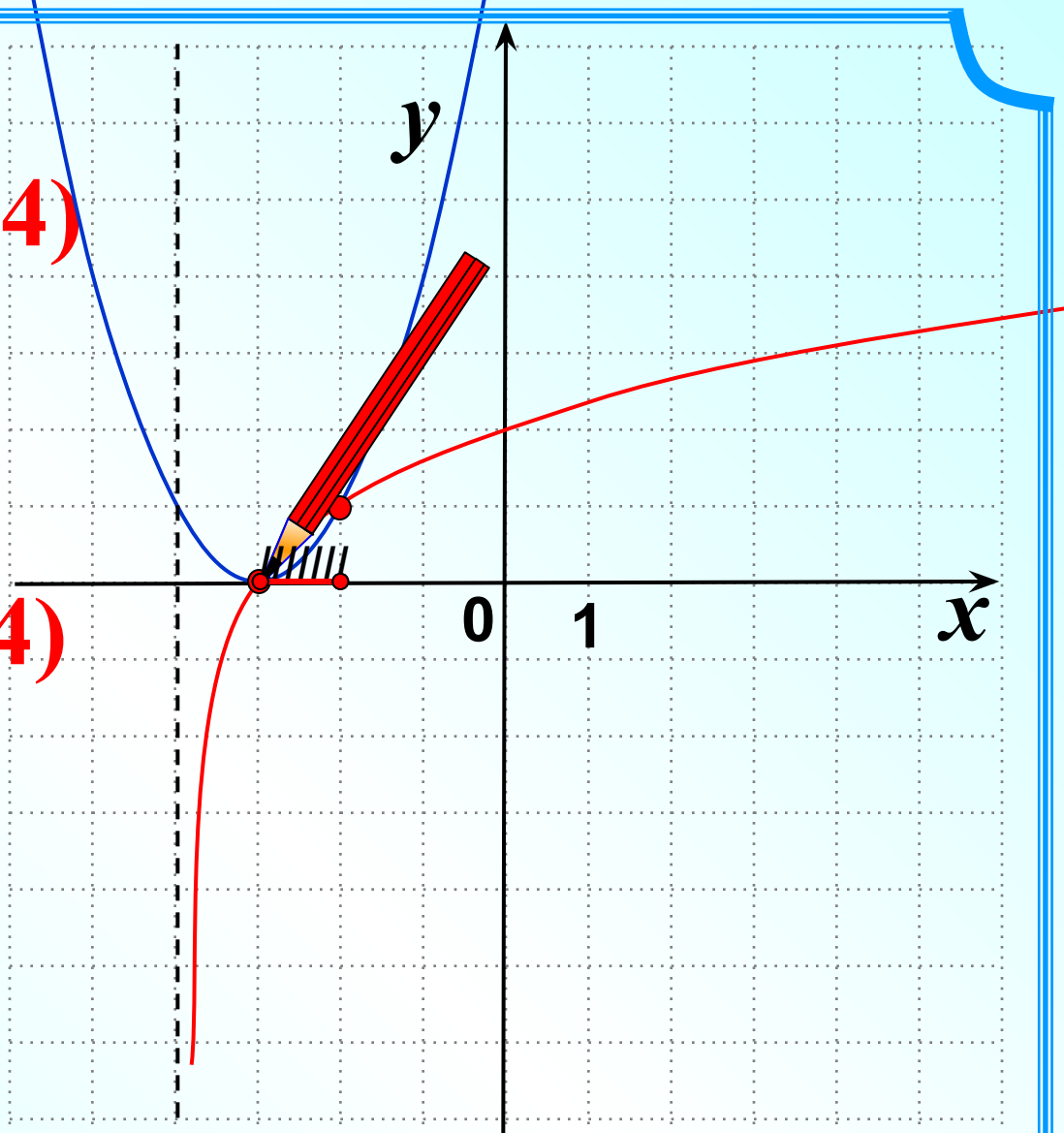
Решить неравенство

$$(x + 3)^2 < 2(x + 4)$$

$$x \in (-3; -2)$$

$$(x + 3)^2 \leq 2(x + 4)$$

$$x \in [-3; -2]$$



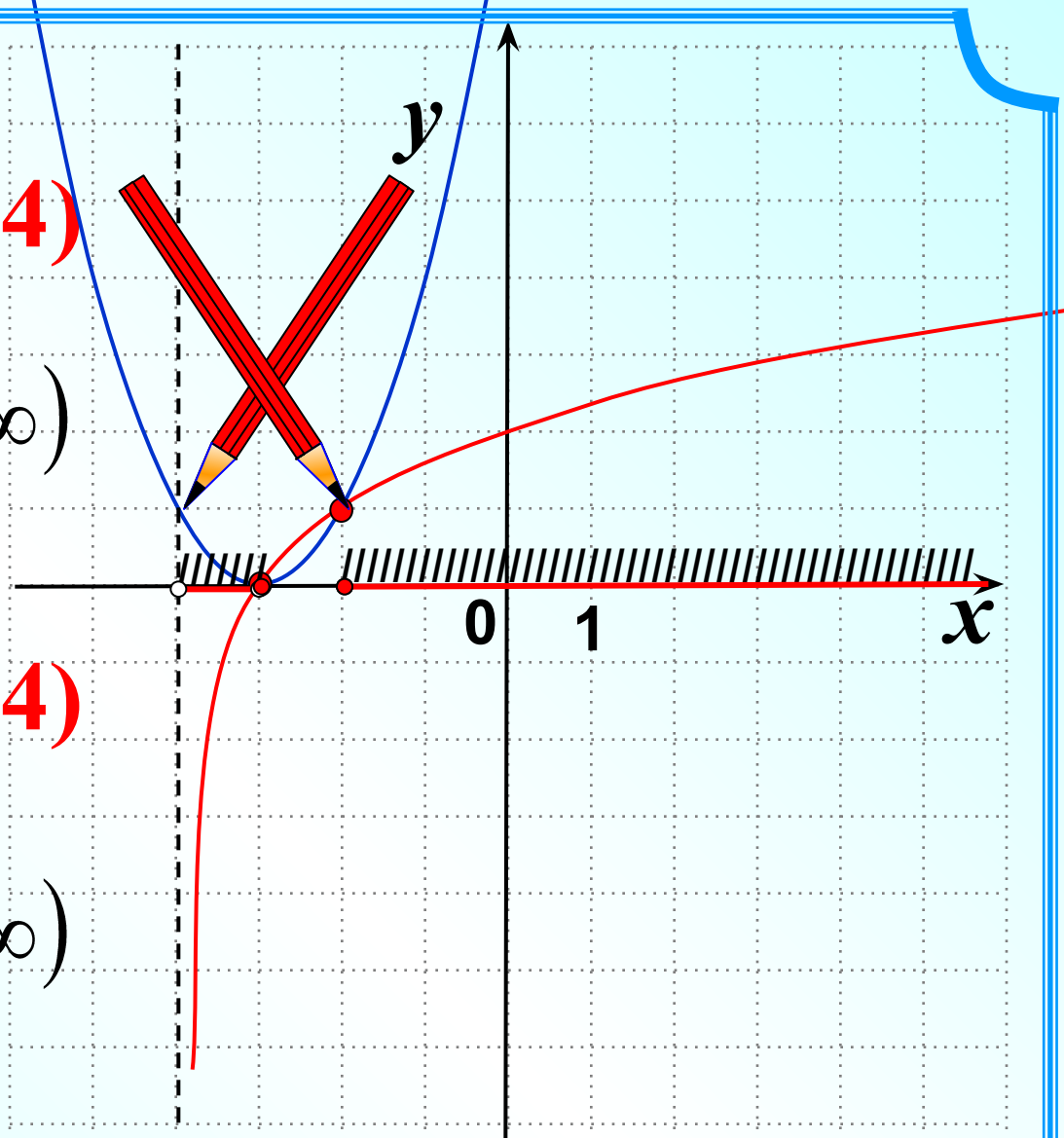
Решить неравенство

$$(x + 3)^2 > \log_2(x + 4)$$

$$x \in (-4; -3) \cup (-2; +\infty)$$

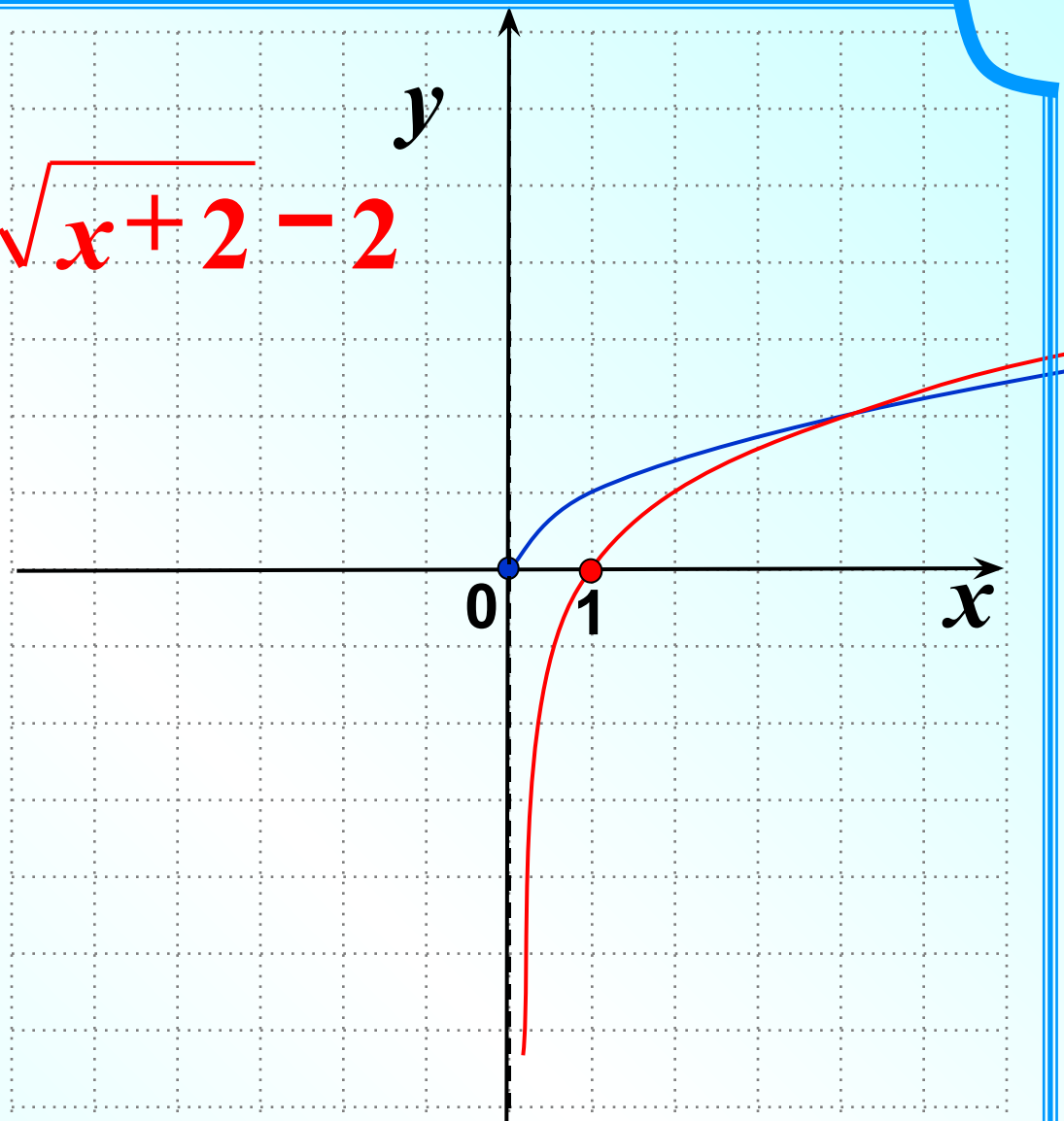
$$(x + 3)^2 \geq \log_2(x + 4)$$

$$x \in (-4; -3] \cup [-2; +\infty)$$



Решить уравнение

$$\log_2(x + 2) - 1 = \sqrt{x + 2} - 2$$

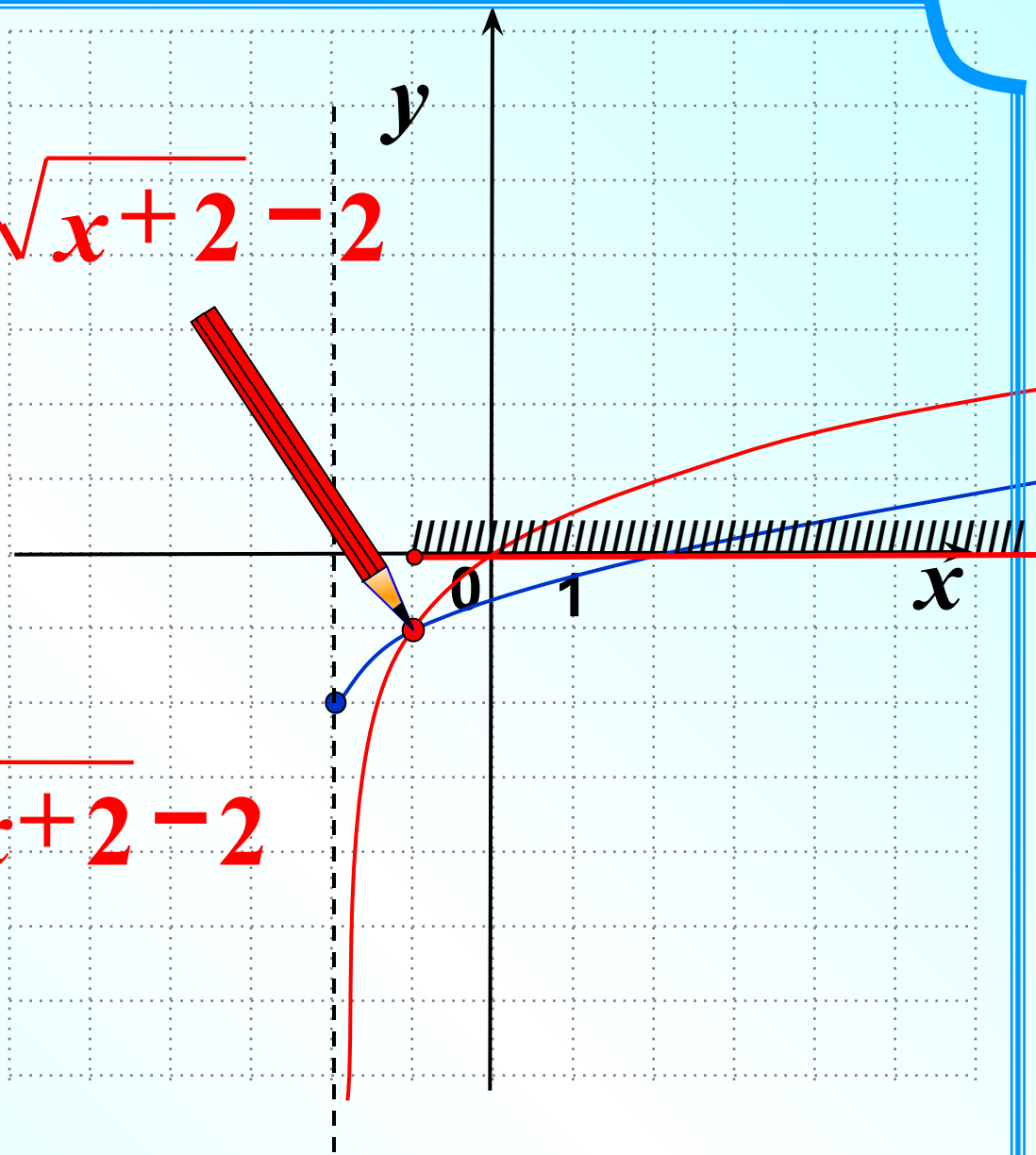


$x = -$

Решить неравенство

$$\log_2(x + 2) - 1 > \sqrt{x + 2} - 2$$

$$x \in (-1; +\infty)$$



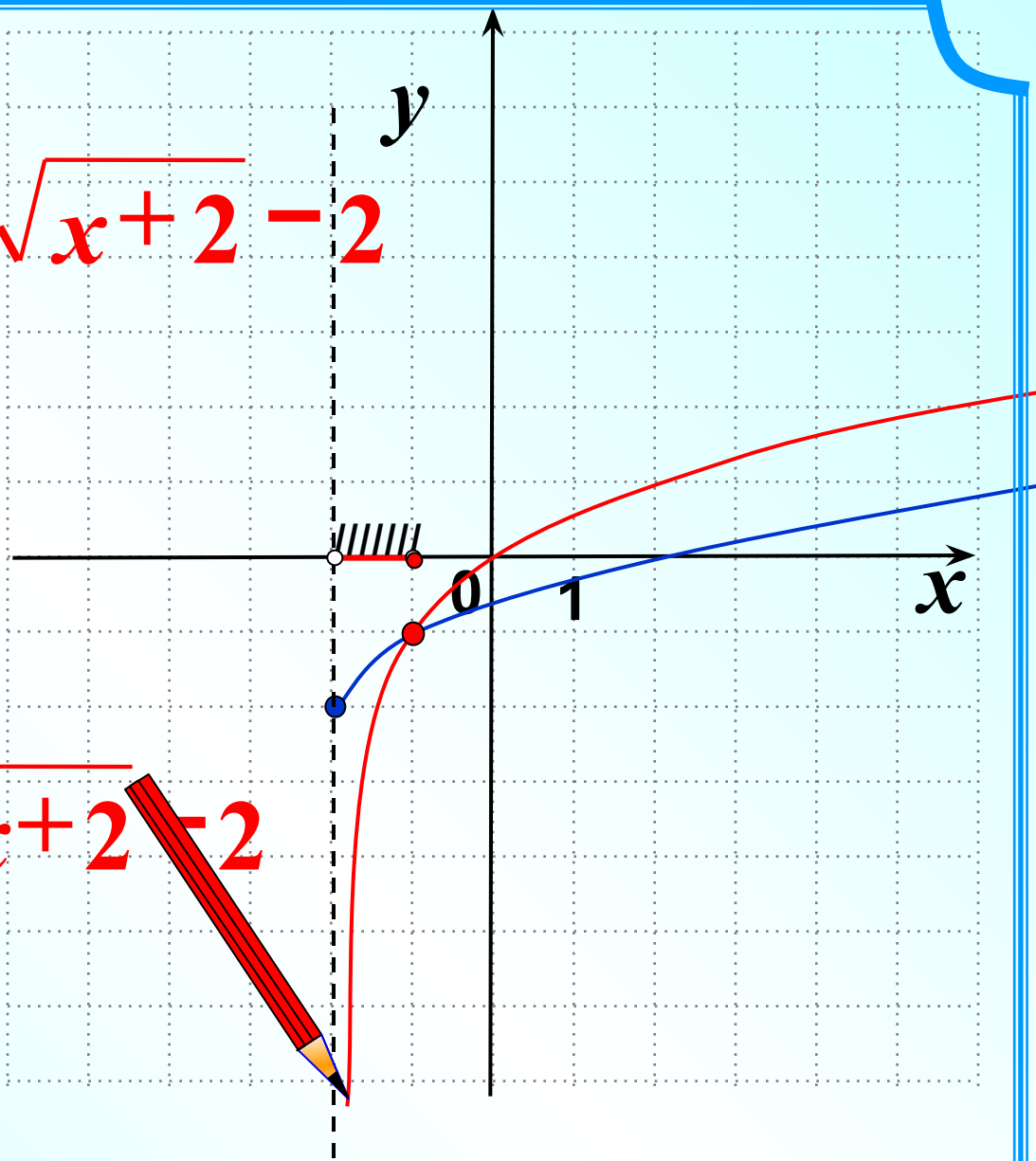
$$\log_2(x + 2) - 1 \geq \sqrt{x + 2} - 2$$

$$x \in [-1; +\infty)$$

Решить неравенство

$$\log_2(x+2) - 1 < \sqrt{x+2} - 2$$

$$x \in (-2; -1)$$



$$\log_2(x+2) - 1 \leq \sqrt{x+2} - 2$$

$$x \in (-2; -1]$$