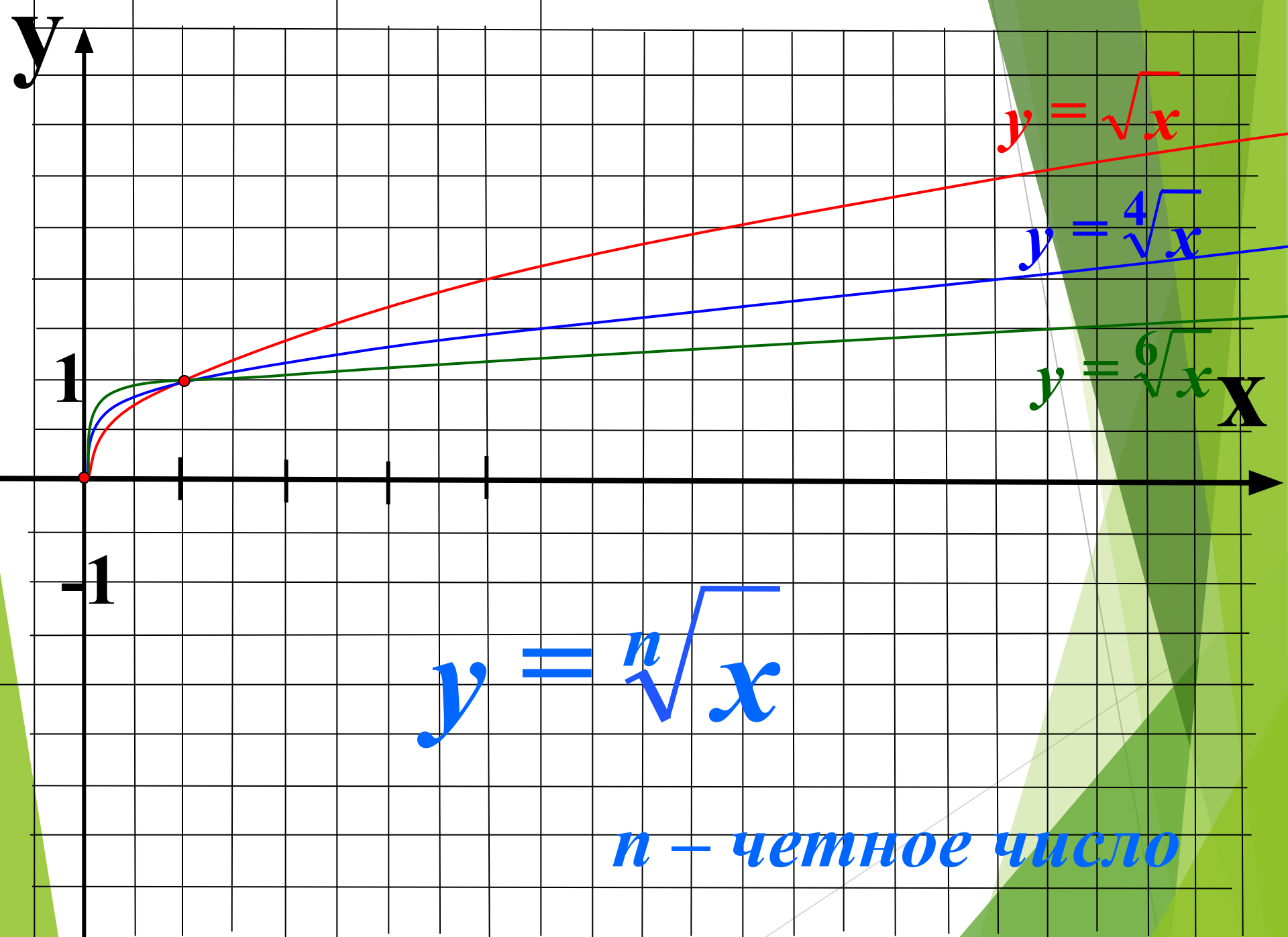


# Функции

$$y = \sqrt[n]{x}$$

их свойства и график

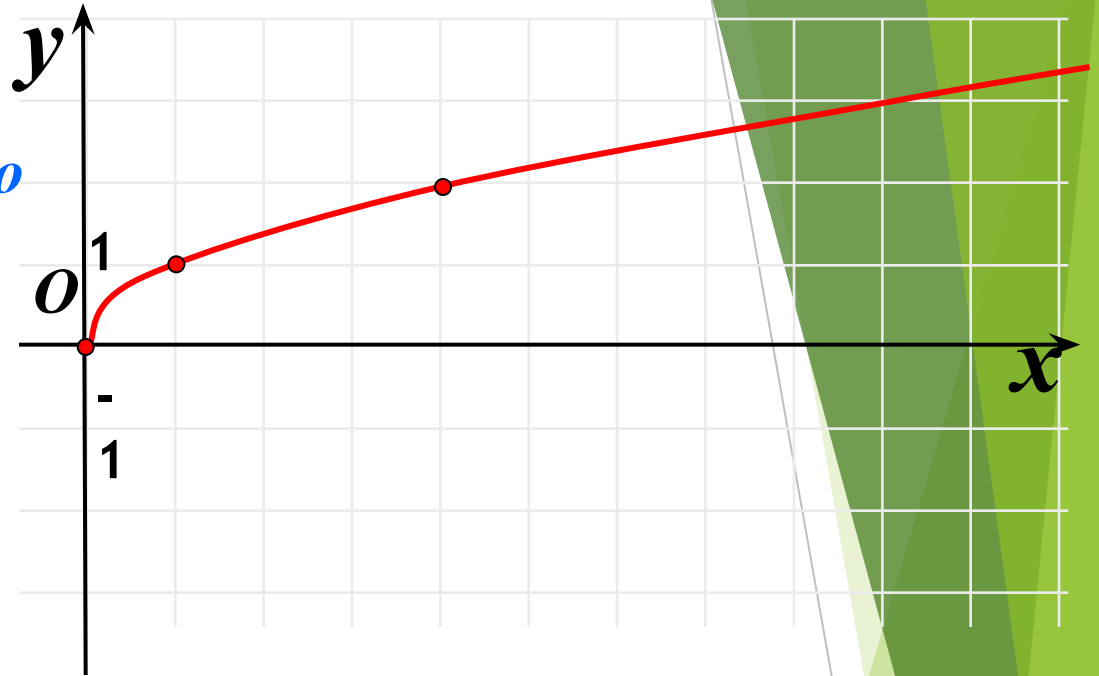


$$y = \sqrt[n]{x}$$

*n – четное число*

$$y = \sqrt[n]{x}$$

$n$  – четное число



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

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

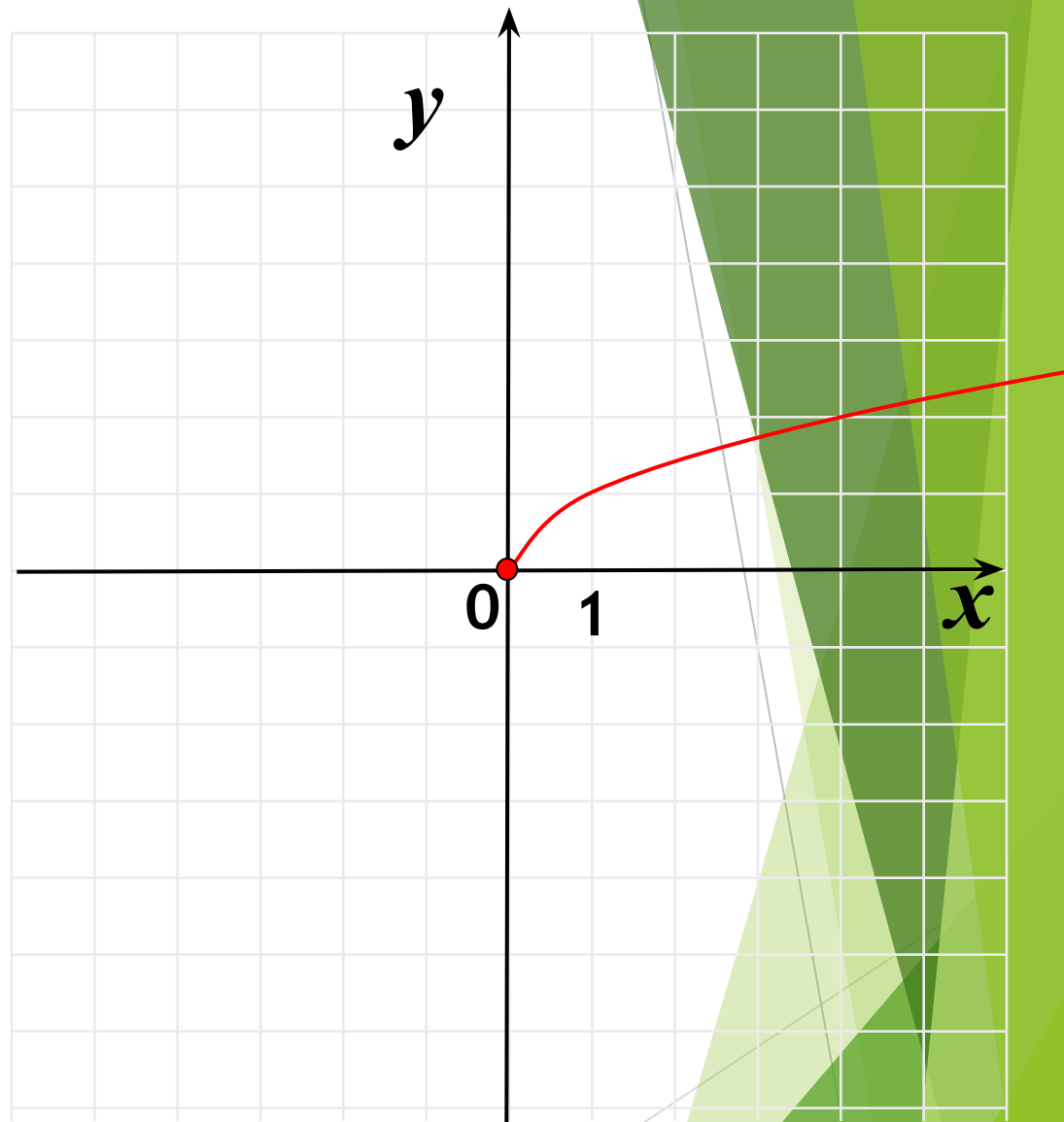
$$y = 0 \quad x = 0$$

$$y > 0 \quad x > 0$$

Функция возрастает  $x \in [0; +\infty)$

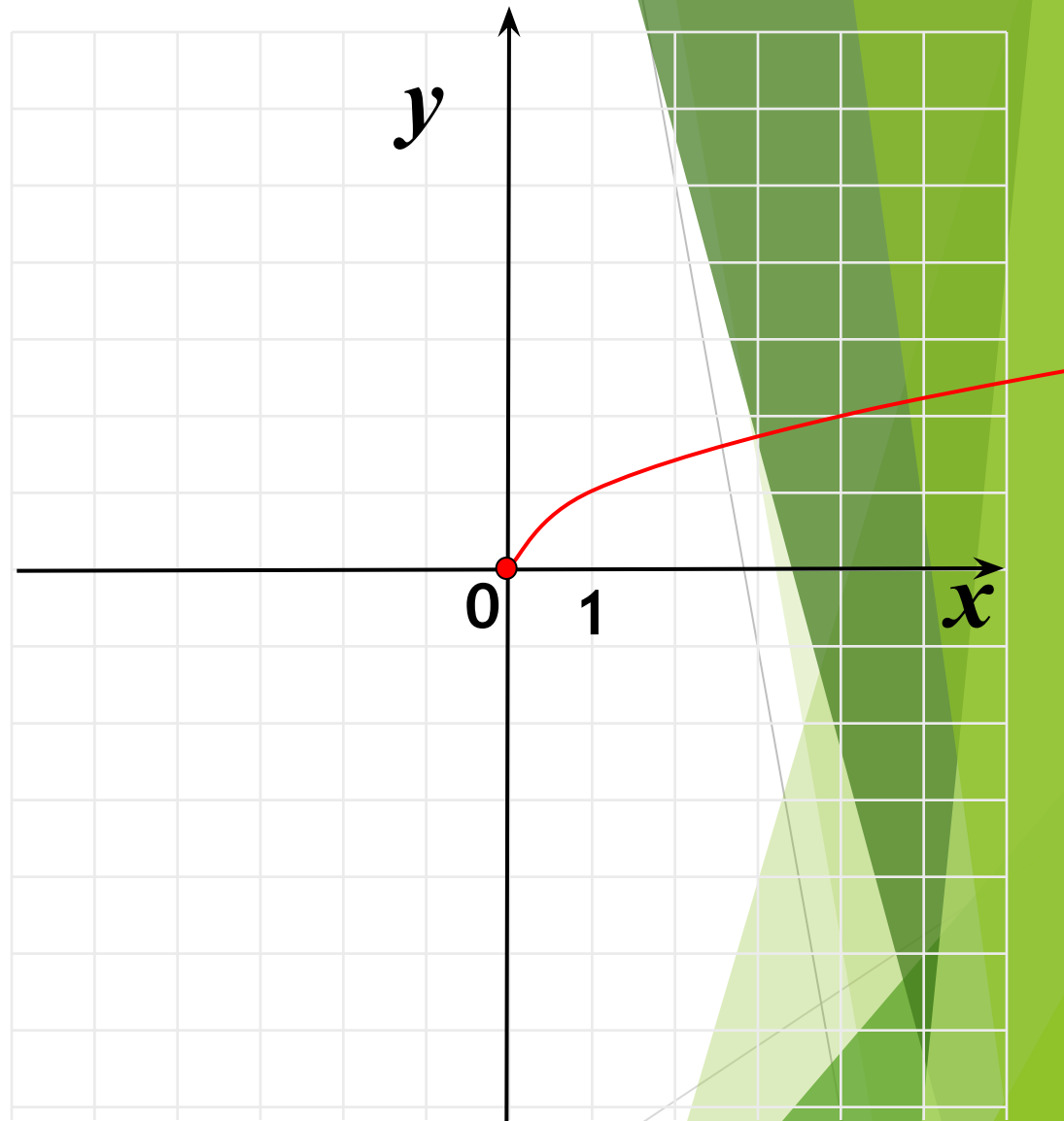
$$y = \sqrt{x+4} - 2$$

← ↓

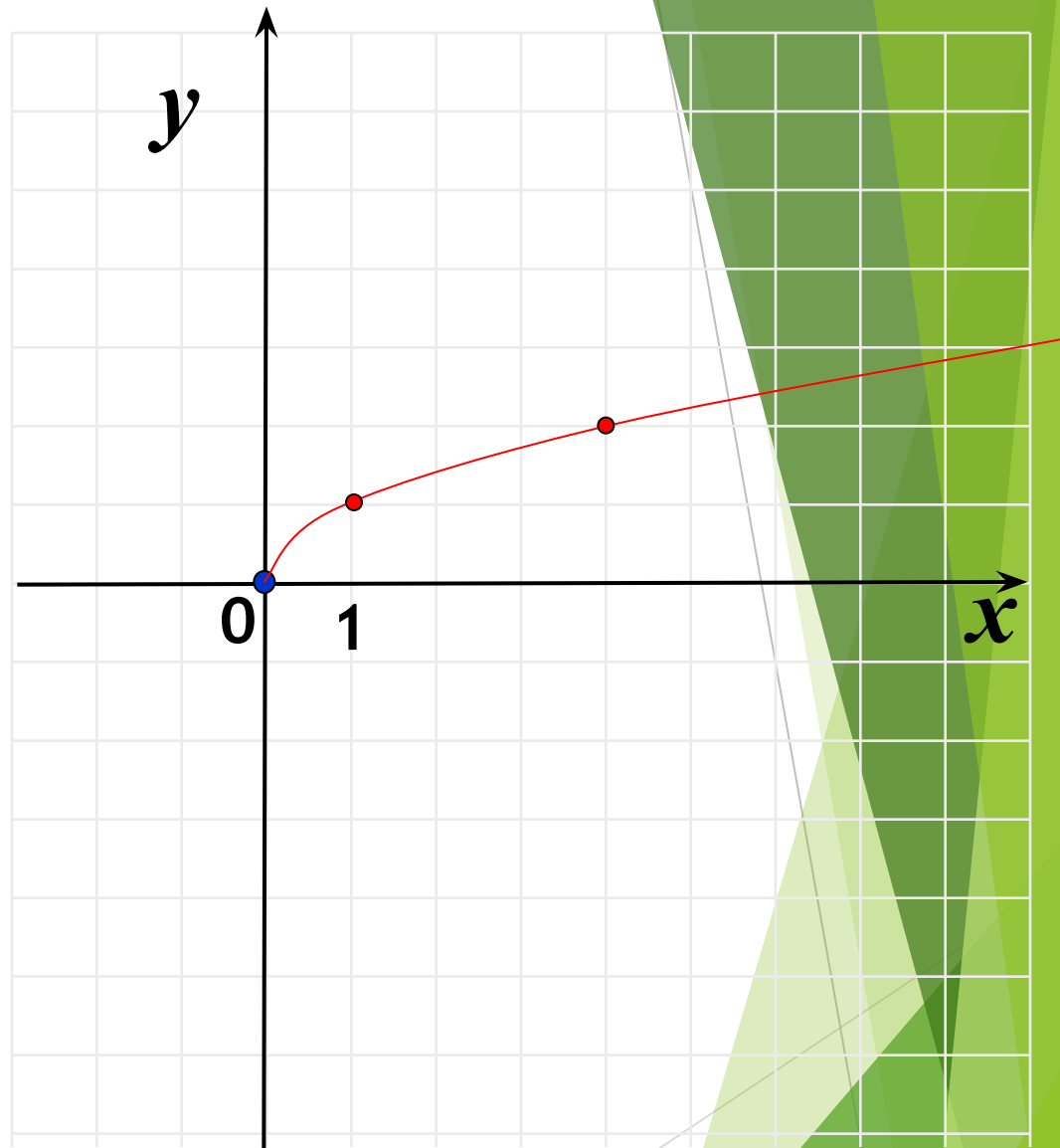


$$y = \sqrt{x-1} - 2$$

A red arrow points to the  $x-1$  term, and another red arrow points to the  $-2$  term.

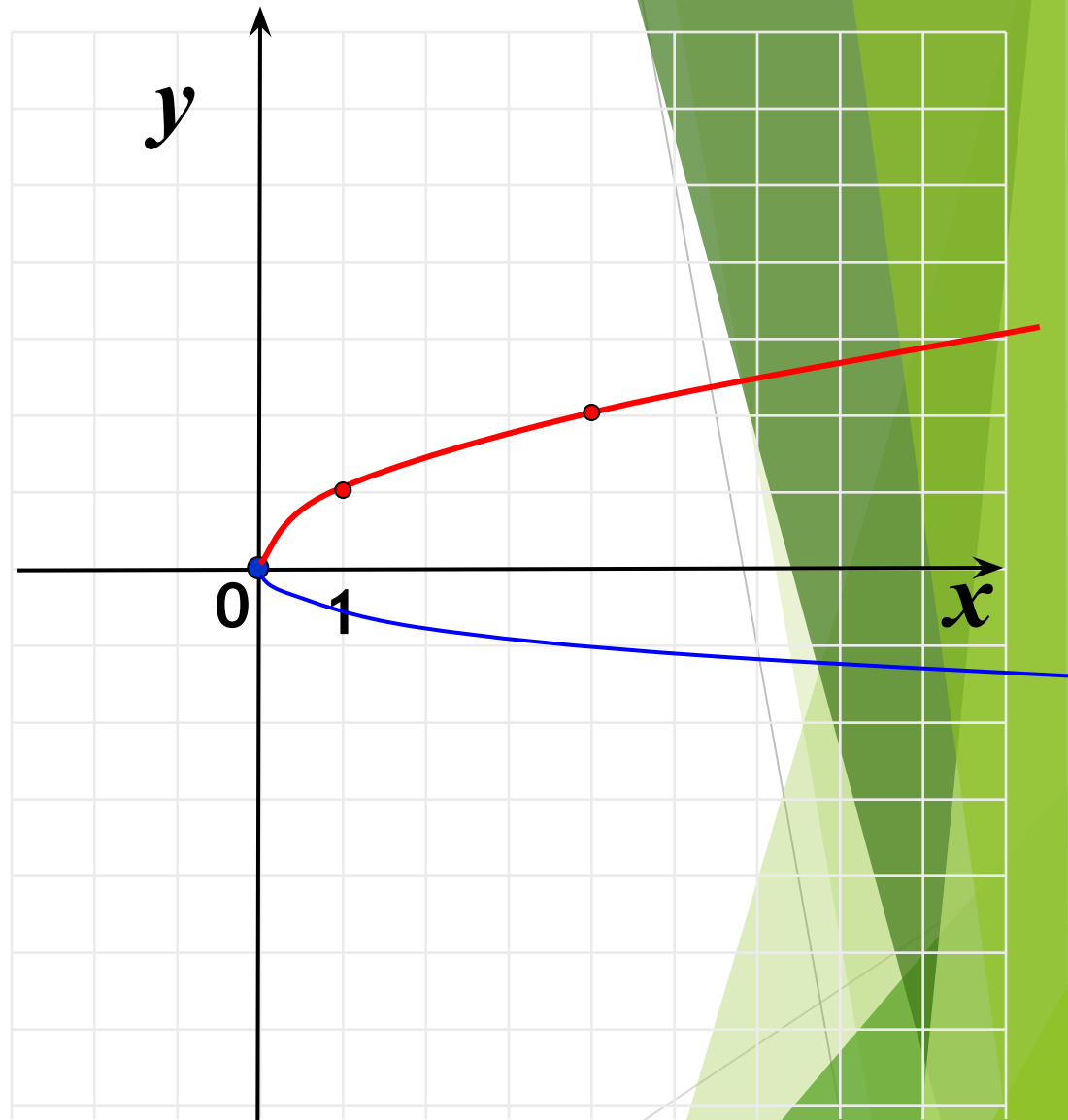


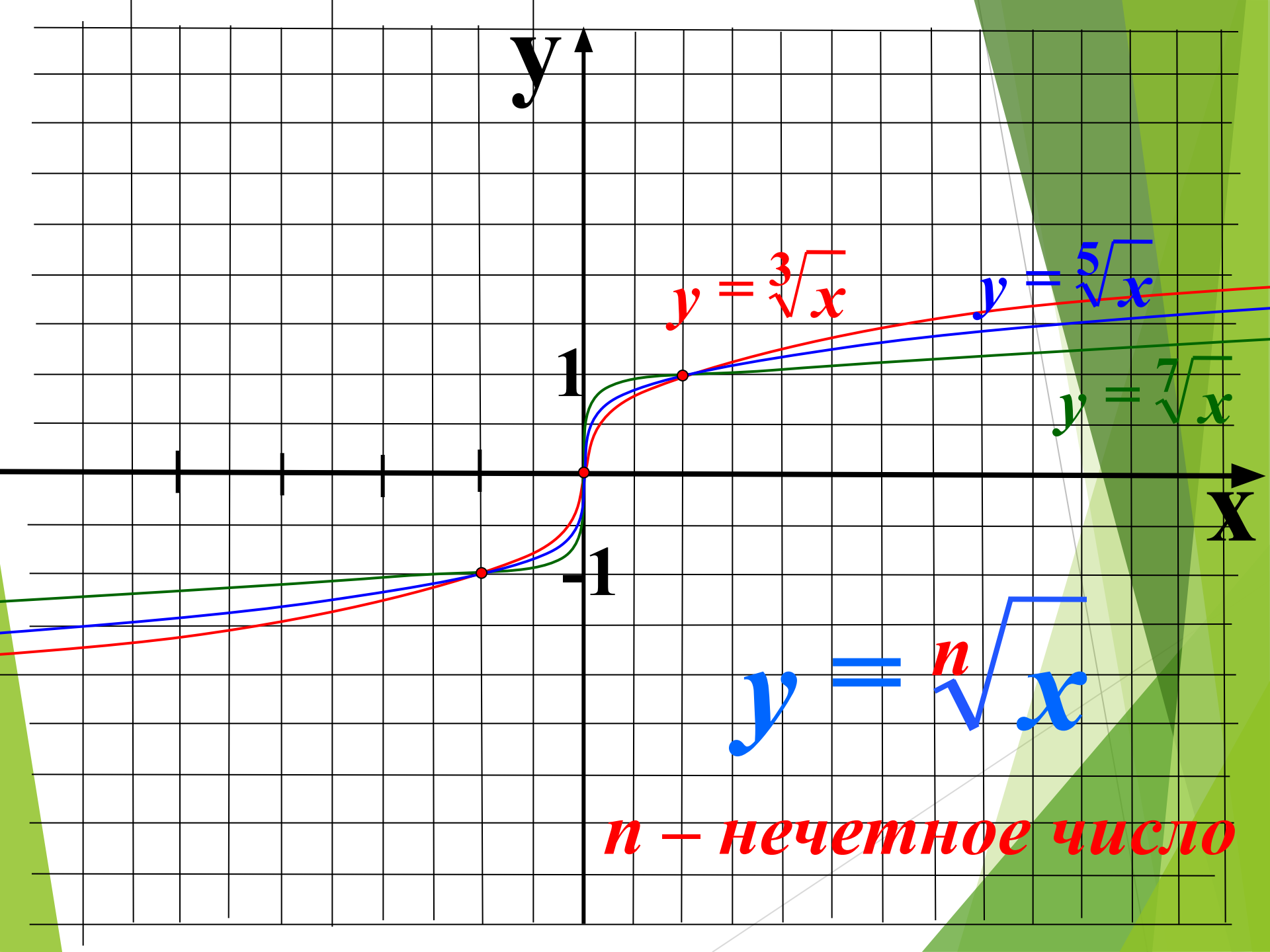
$$y = 2\sqrt{x}$$



$$y = \frac{1}{2} \sqrt{x}$$

$$y = -\frac{1}{2} \sqrt{x}$$





$y$

$$y = \sqrt[3]{x}$$

$$y = \sqrt[5]{x}$$

$$y = \sqrt[7]{x}$$

1

-1

$x$

$$y = \sqrt[n]{x}$$

$n$  – нечетное число



$$y = \sqrt[n]{x}$$

$n$  – нечетное число

$y$

$$y = \sqrt[3]{x}$$

$O$

1

-1

$x$

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

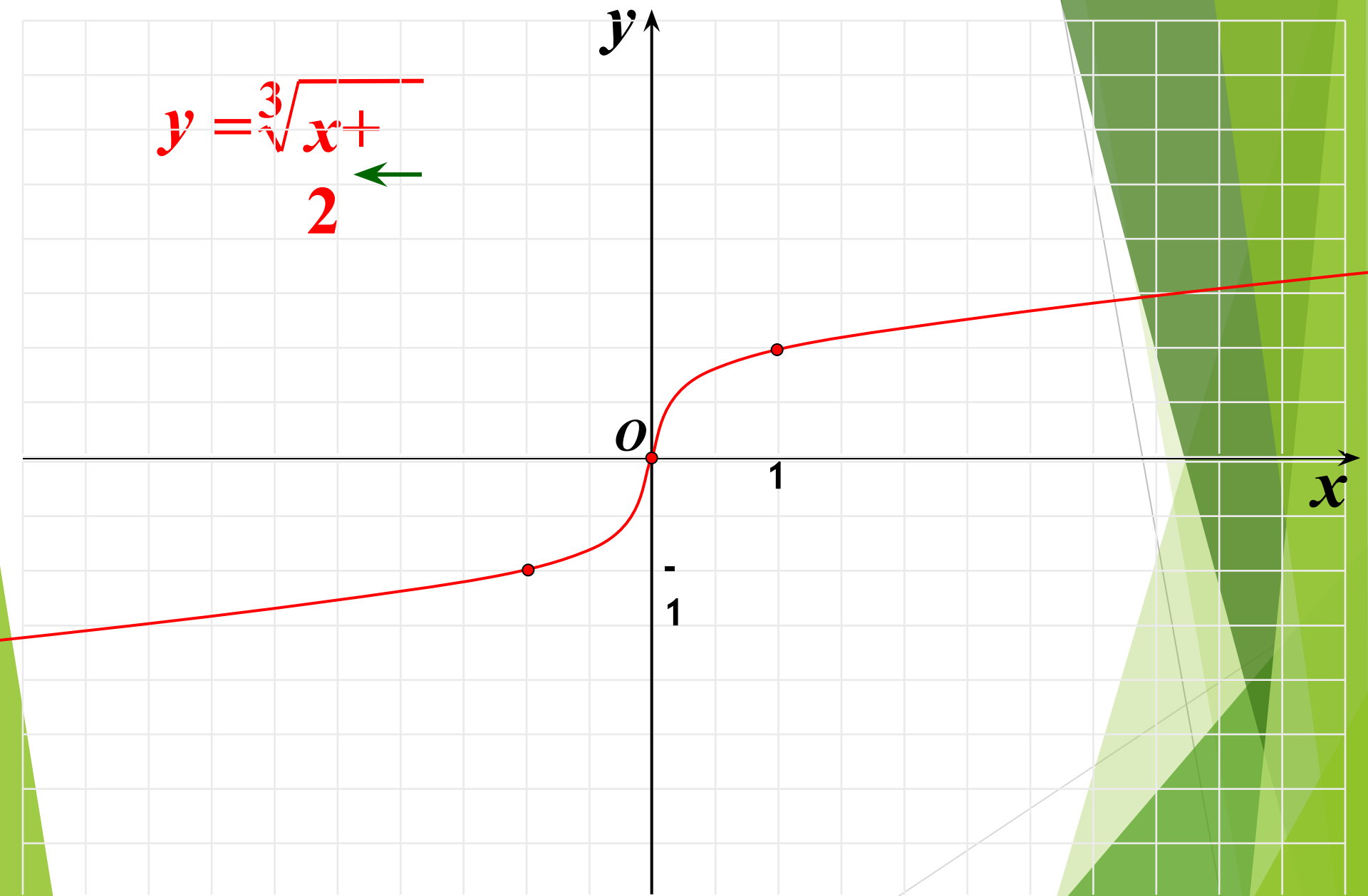
$$y = 0 \quad x = 0$$

$$y > 0 \quad x > 0$$

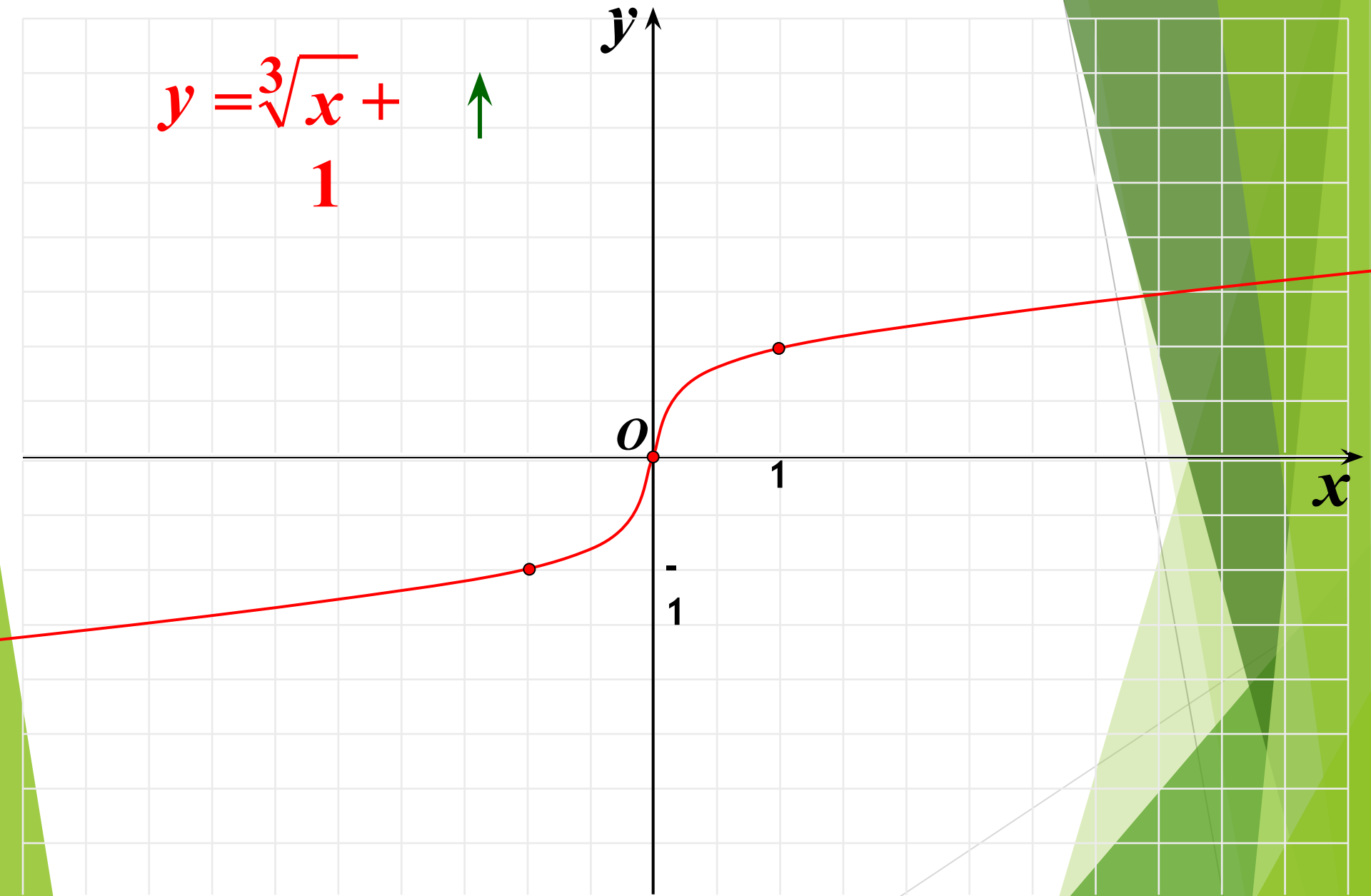
$$y < 0 \quad x < 0$$

Функция возрастает  $x \in (-\infty; +\infty)$

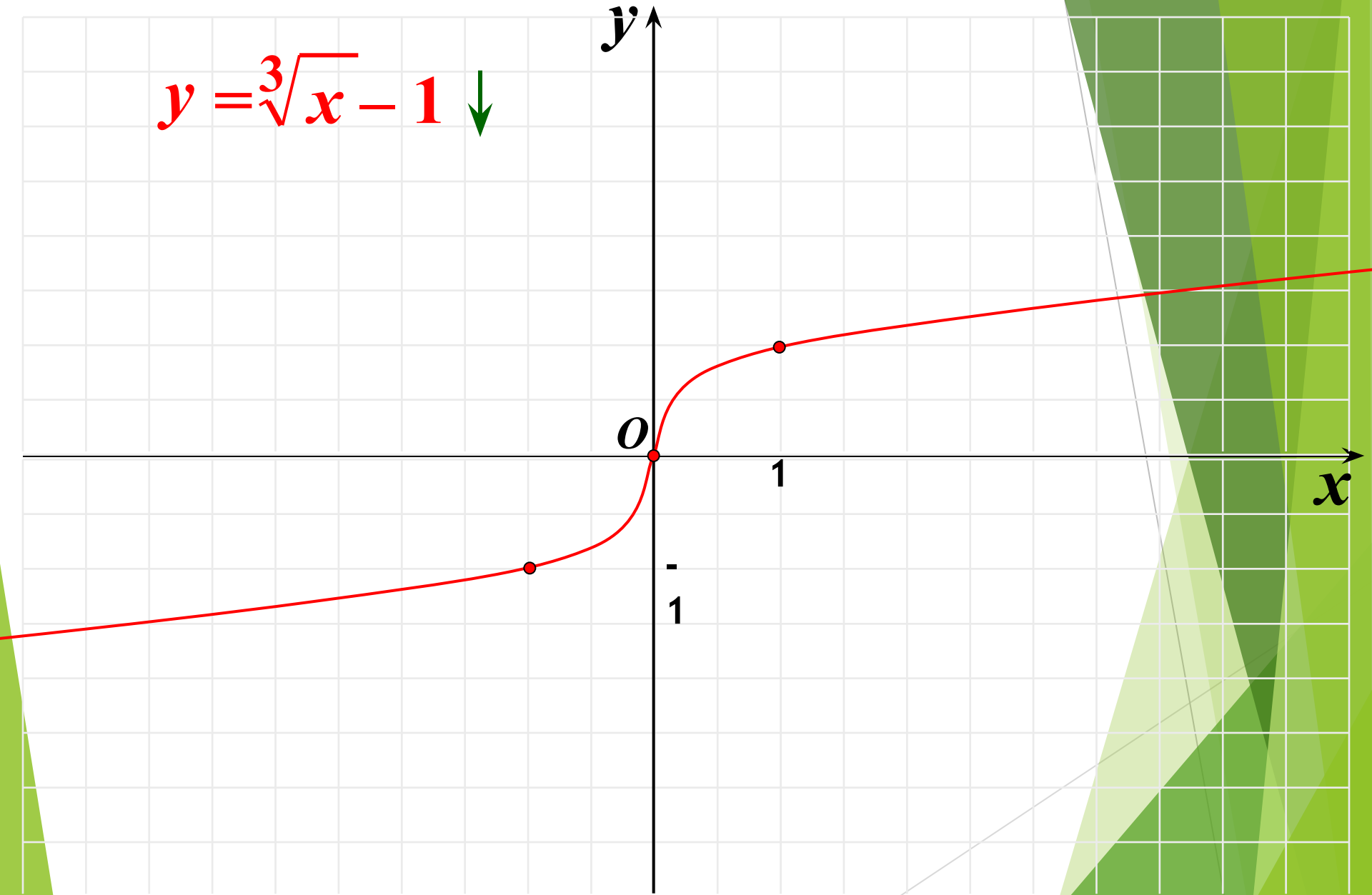
$$y = \sqrt[3]{x+2}$$



$$y = \sqrt[3]{x} + 1$$

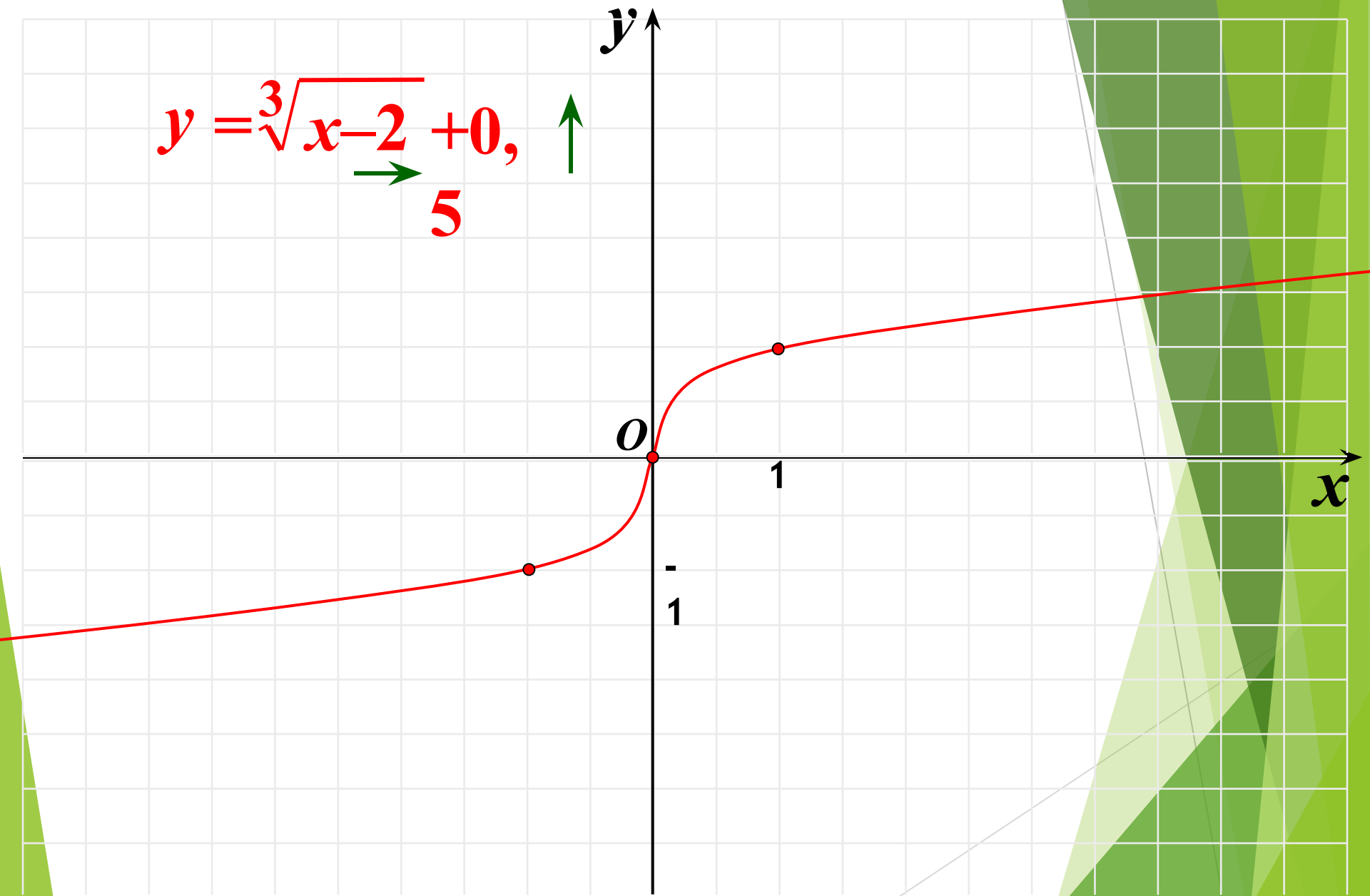


$$y = \sqrt[3]{x} - 1 \downarrow$$



$$y = \sqrt[3]{x-2} + 0,$$

→ 5      ↑



$$y = \sqrt[3]{x}$$

2

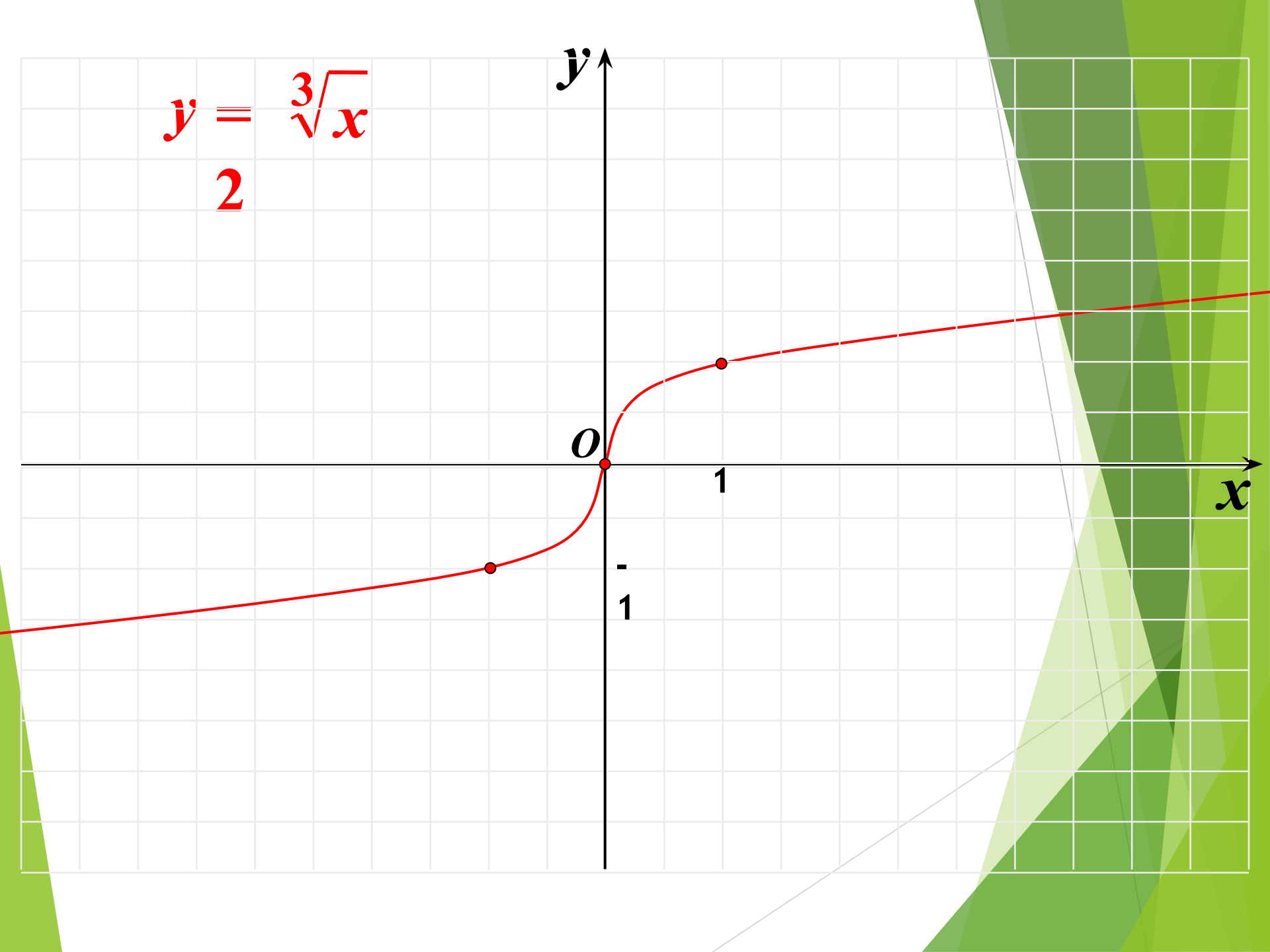
$y$

$O$

1

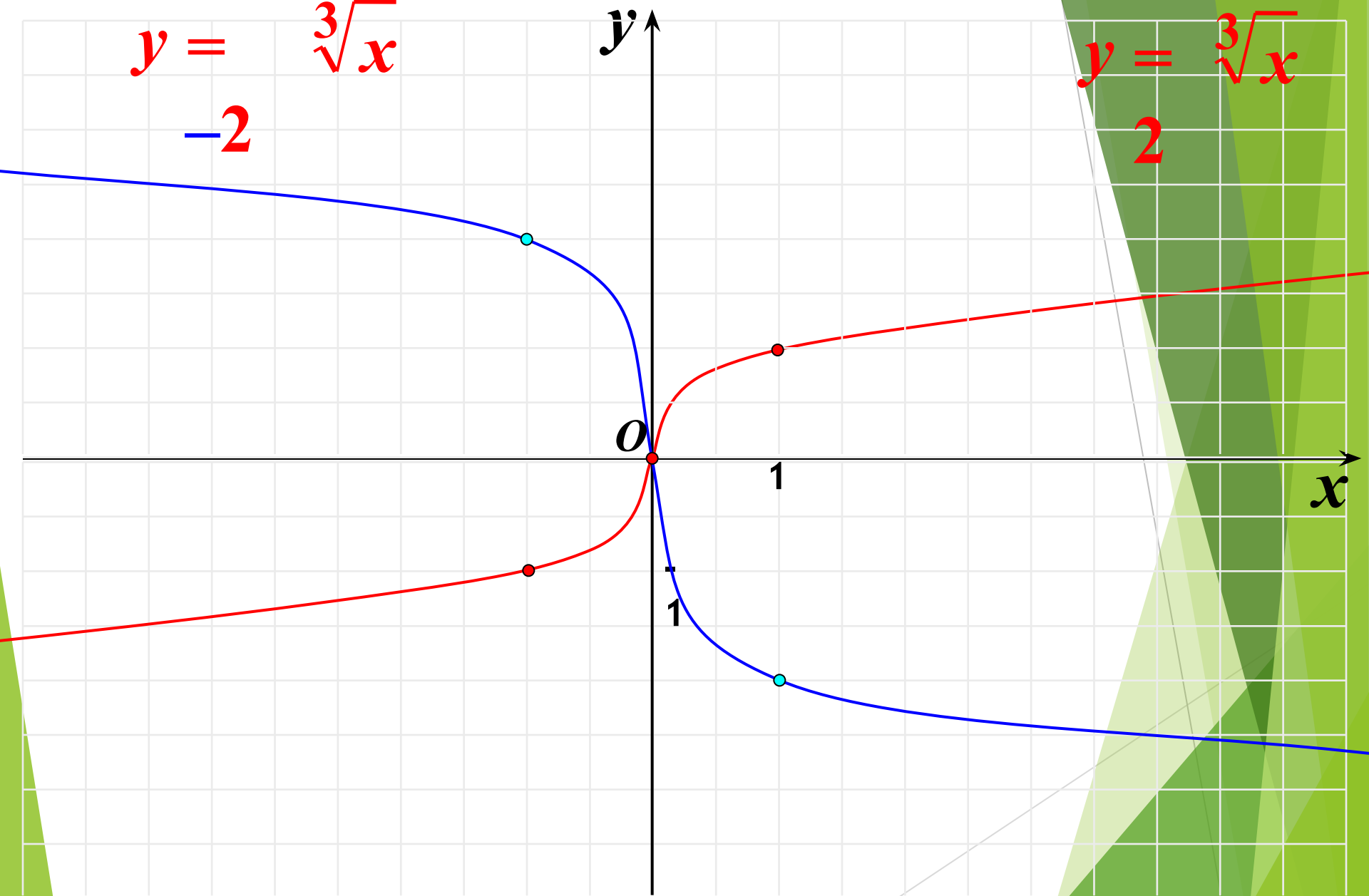
-1

$x$

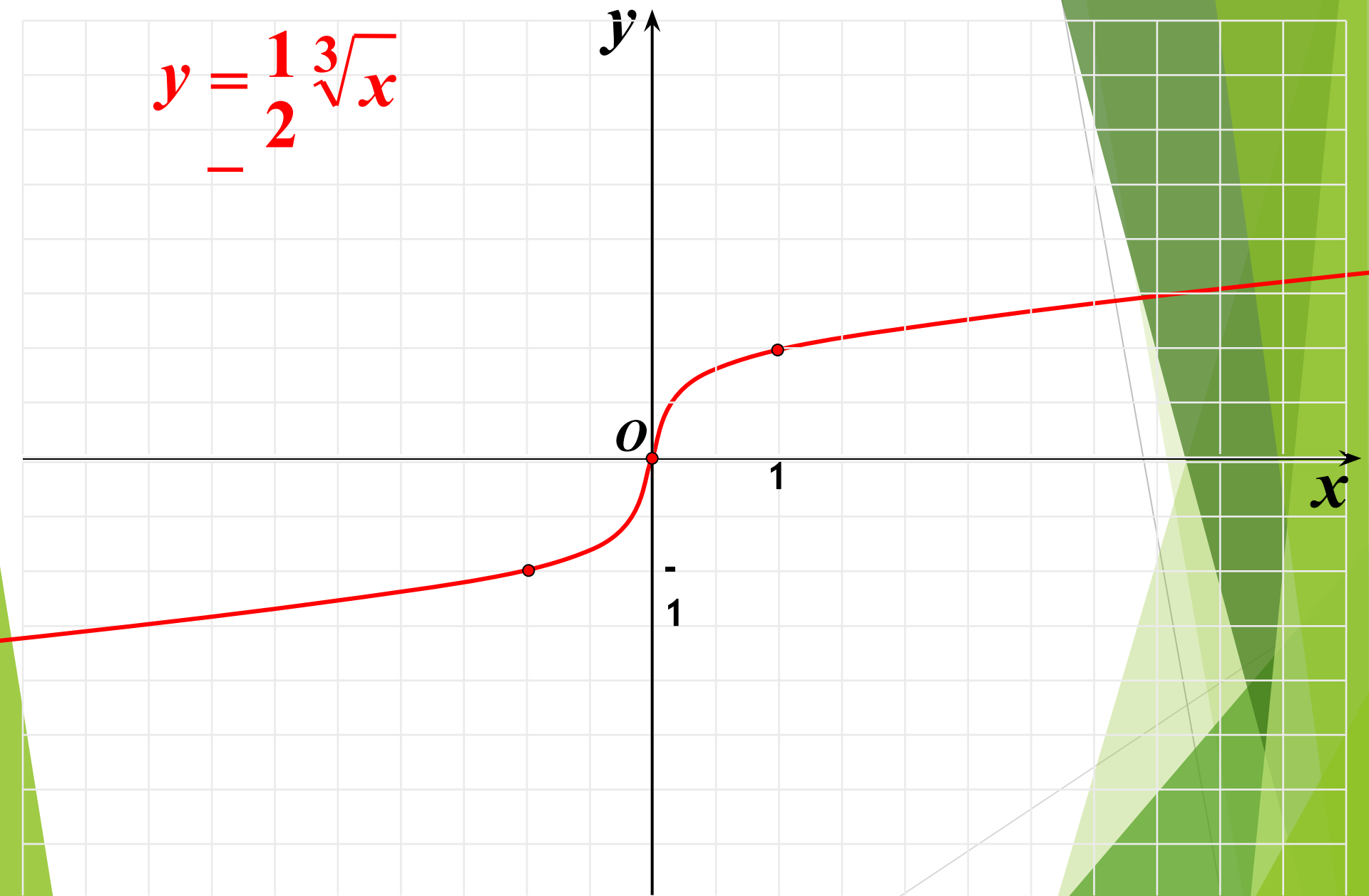


$$y = \sqrt[3]{x} - 2$$

$$y = \sqrt[3]{x} + 2$$



$$y = \frac{1}{2} \sqrt[3]{x}$$





$$y = \sqrt[3]{|x|}$$

$y$

$0$

$1$

$-1$

$x$

