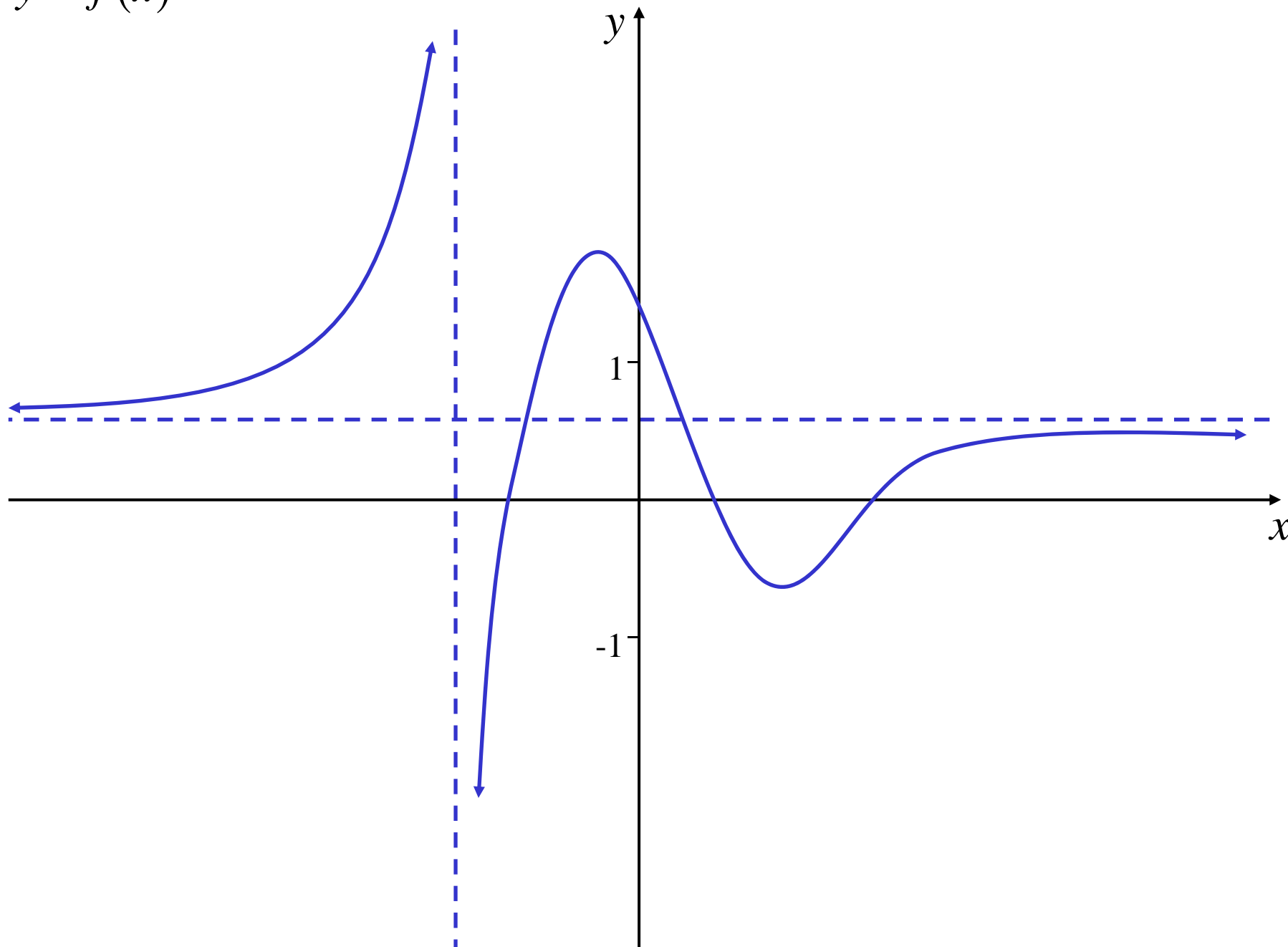


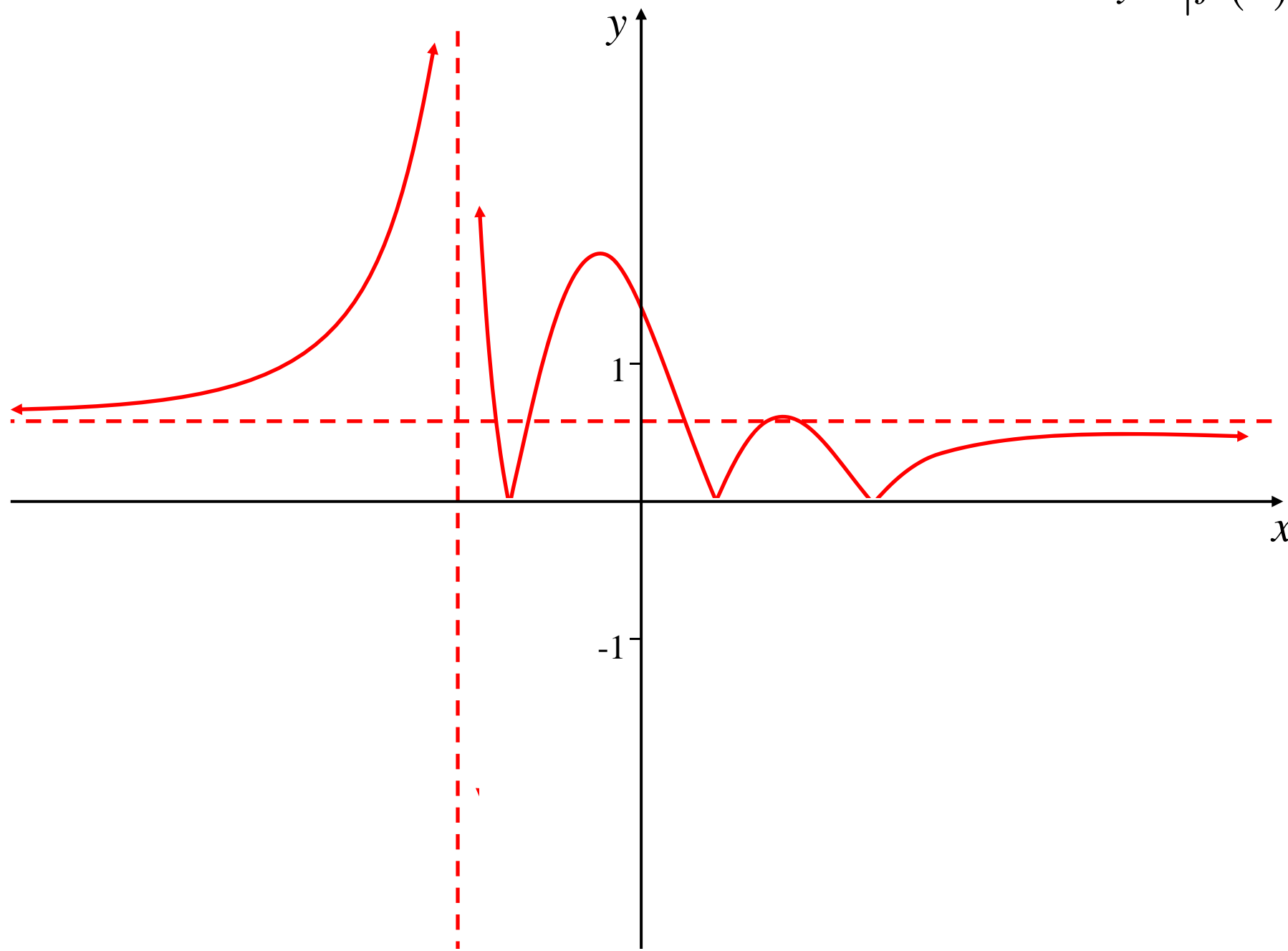
(H)Graphs of Absolute Value Functions

- $y = |f(x)|$ (*reflection in the x axis*)
(*reflect the part of $f(x)$ where $f(x) < 0$ in the x axis*)
- $y = f(|x|)$ (*symmetry in the y axis*)
(*reflect the part of $f(x)$ where $x > 0$ in the y axis*)
- $|y| = f(x)$ (*symmetry in the x axis*)
(*reflect the part of $f(x)$ where $f(x) > 0$ in the x axis*)
- $|y| = f(|x|)$ (*symmetry in the x and y axes*)
(*reflect the part of $f(x)$ in the 1st quadrant into all four quadrants*)
- $y = |f(|x|)|$ (*symmetry in the y axis and reflection in the x axis*)
(*reflect the part of $f(x)$ where $x > 0$ in the y axis, then reflect result in the y axis*)
- $|y| = |f(x)|$ (*symmetry in the x axis and reflection in the x axis*)
(*reflect the part of $f(x)$ where $f(x) < 0$ in the x axis, then reflect result in the x axis*)

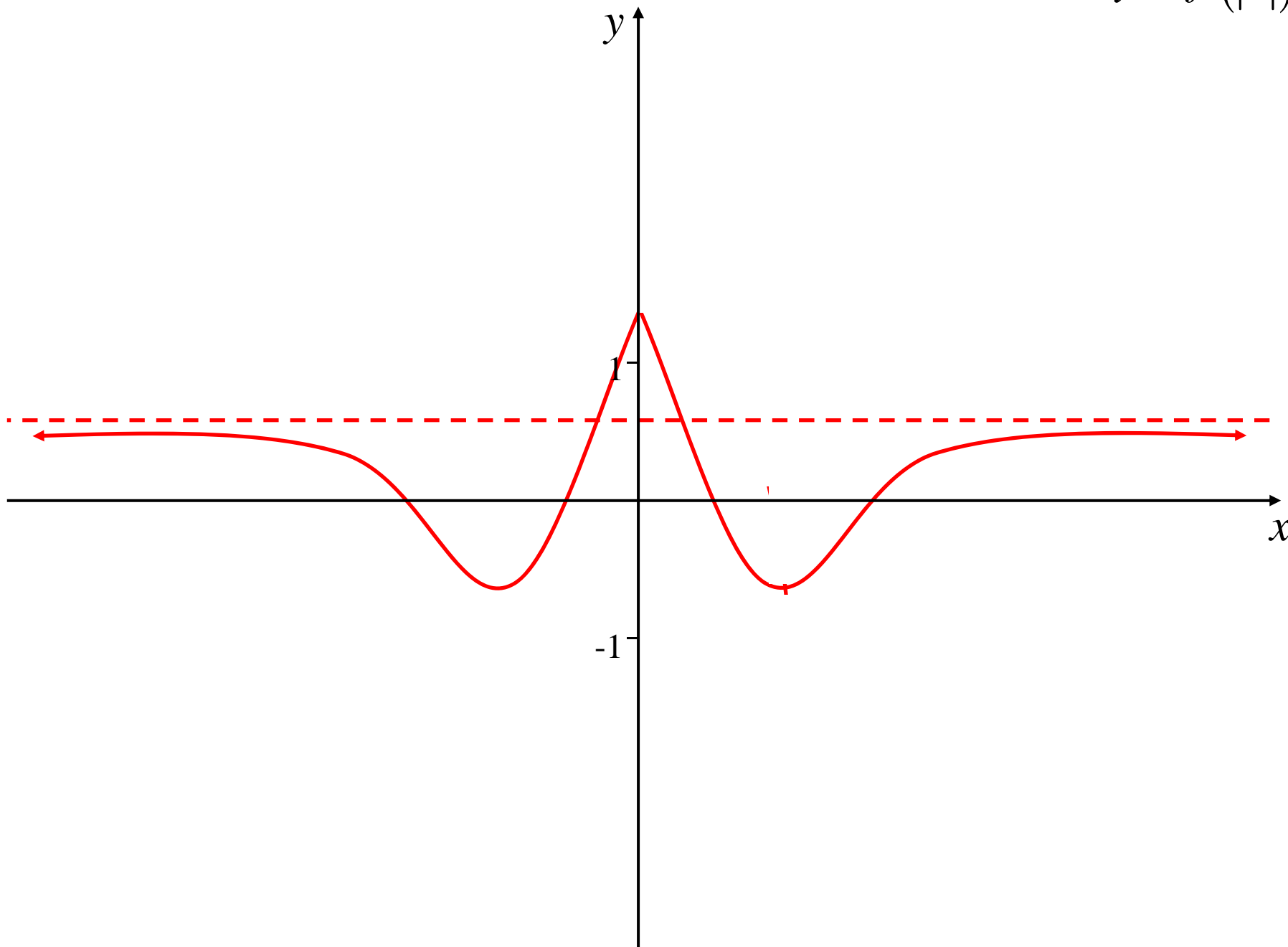
$$y = f(x)$$



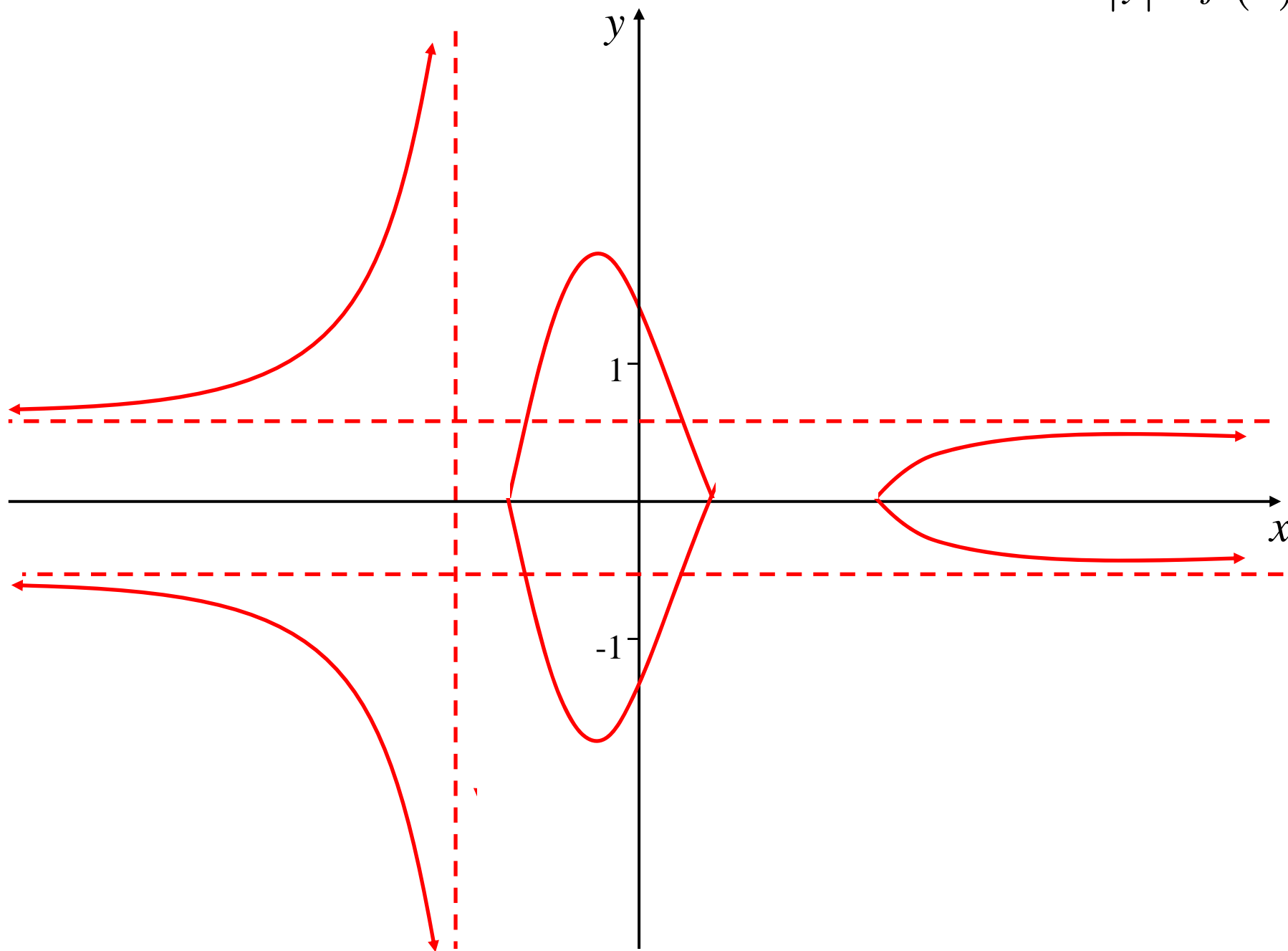
$$y = |f(x)|$$



$$y = f(|x|)$$

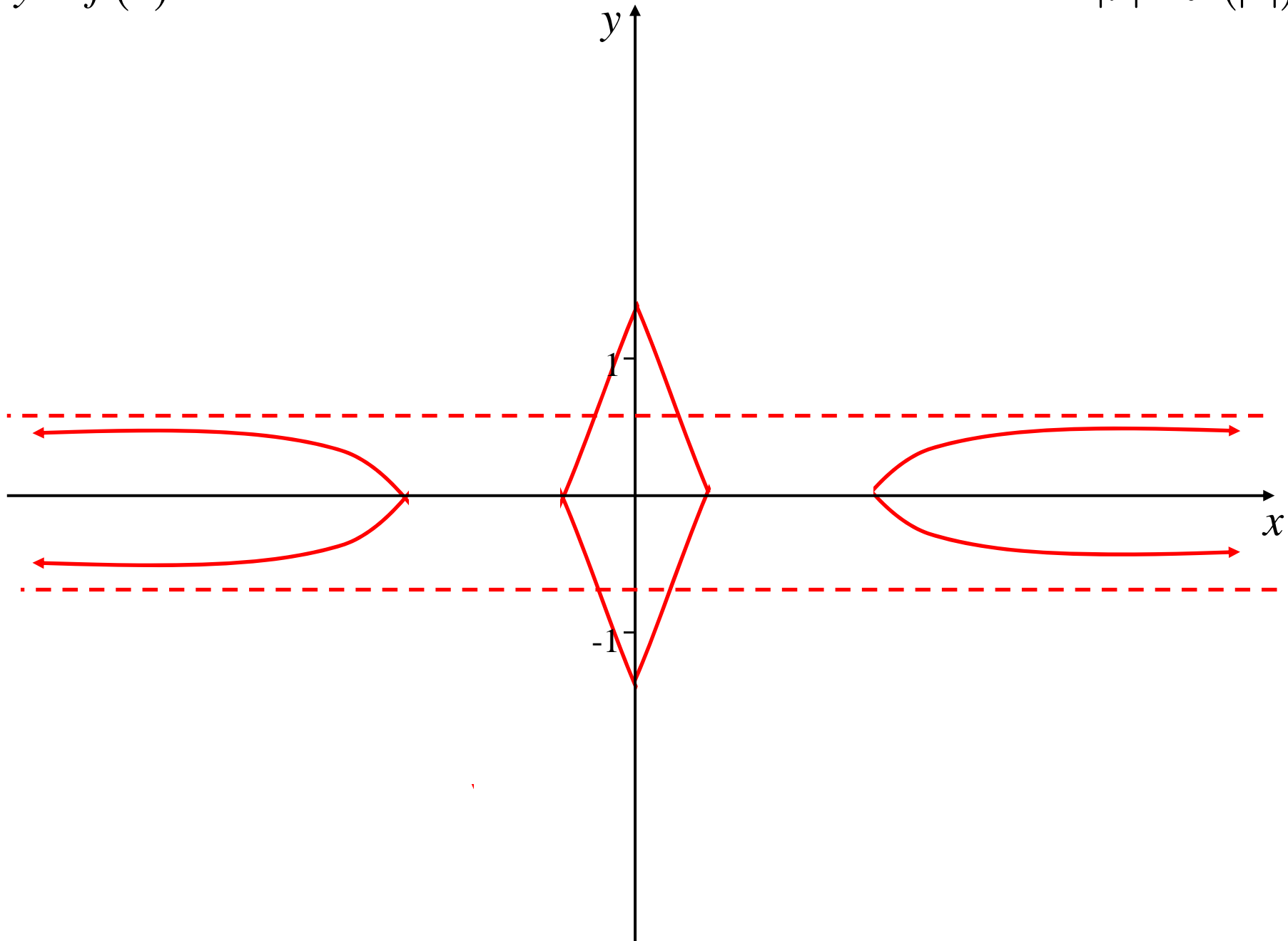


$$|y| = f(x)$$

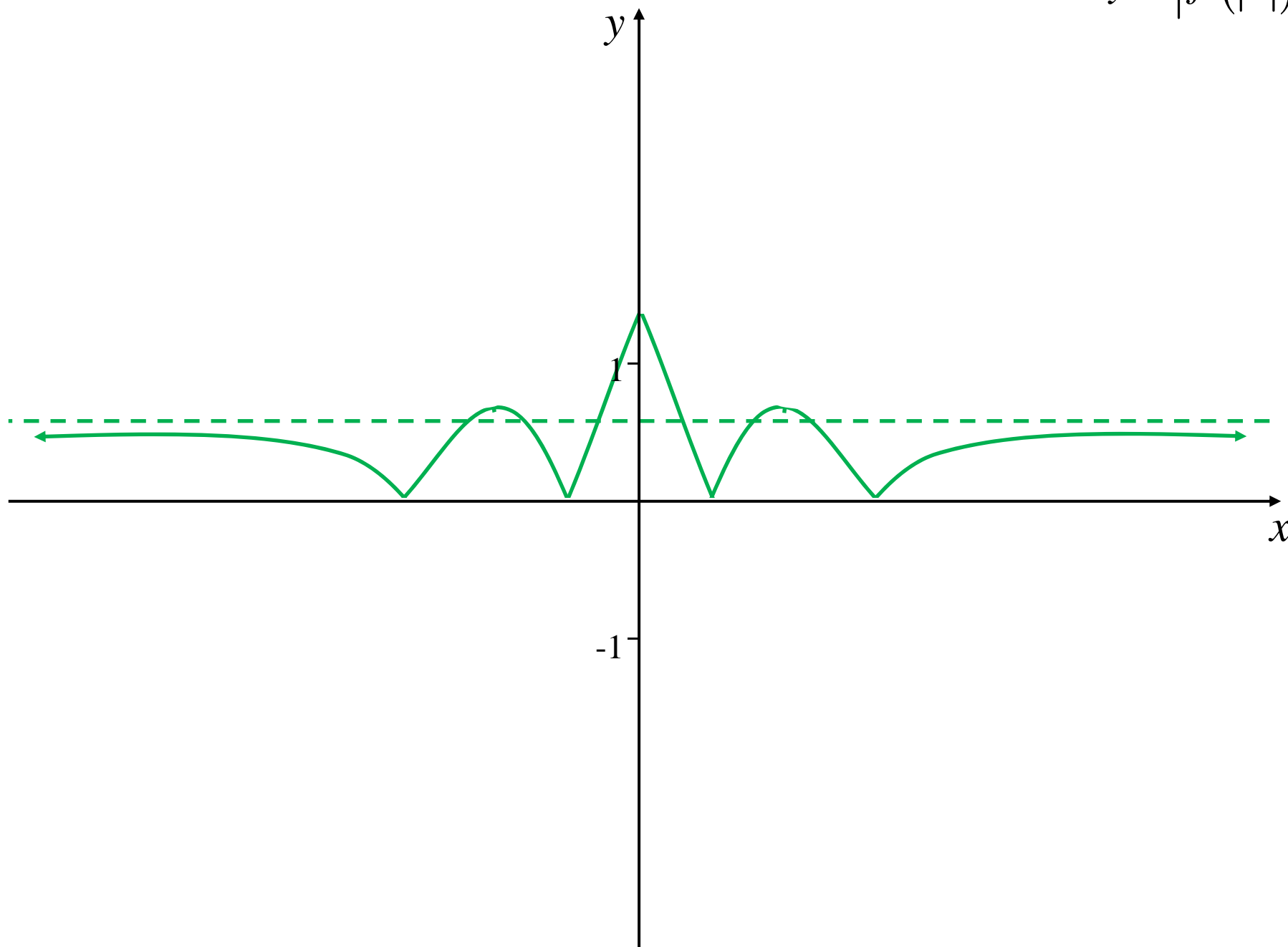


$$y = f(x)$$

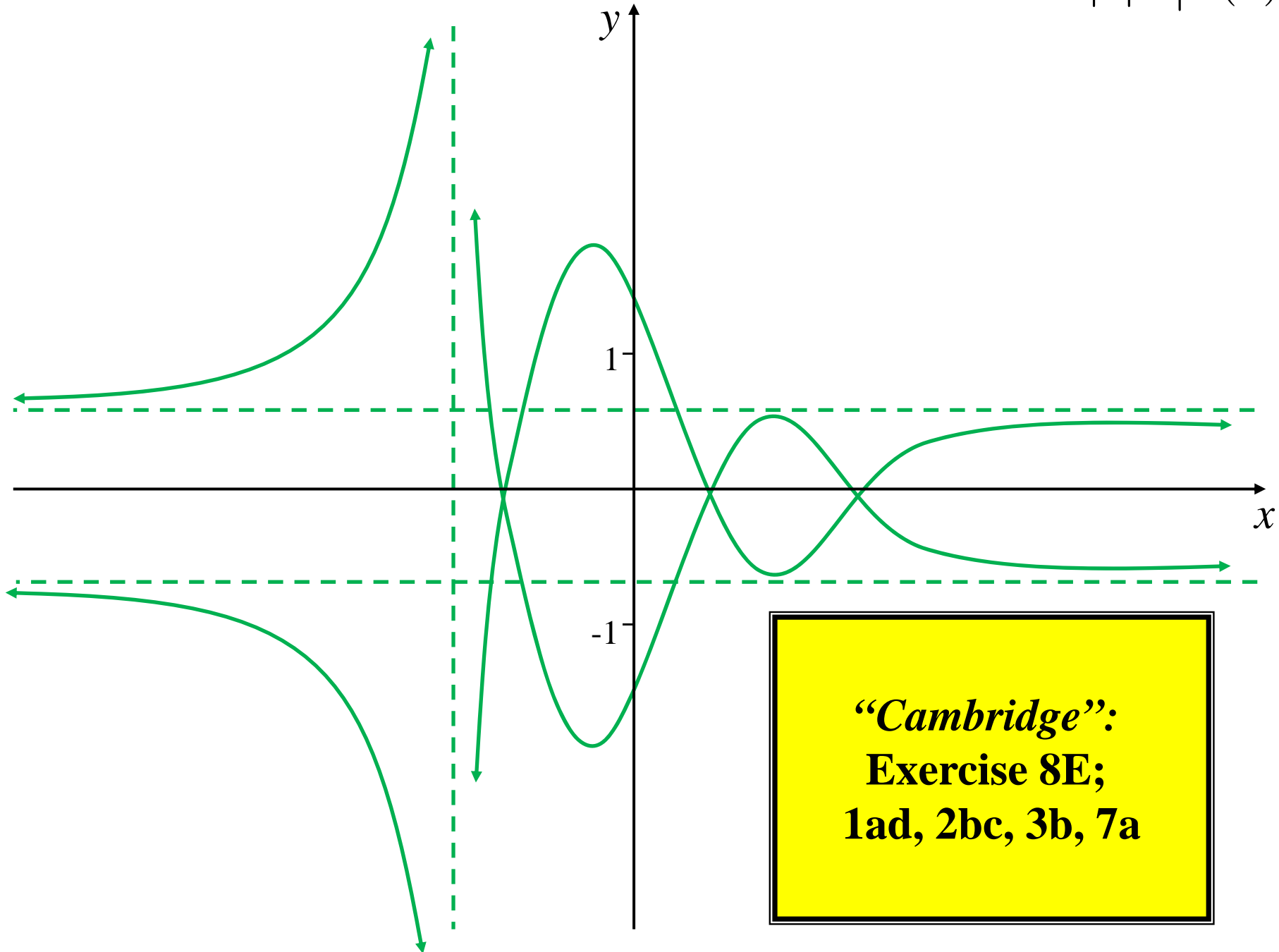
$$|y| = f(|x|)$$



$$y = |f(|x|)|$$



$$|y| = |f(x)|$$



**“Cambridge”:
Exercise 8E;
1ad, 2bc, 3b, 7a**