

# End Behavior

What does the function do as we travel left and right along the x-axis forever in both directions?

End behavior  
on left:

As  $x \Rightarrow -\infty$ ,

$y \Rightarrow$  \_\_\_\_\_

$x \rightarrow -\infty$

$y \rightarrow$  \_\_\_\_\_

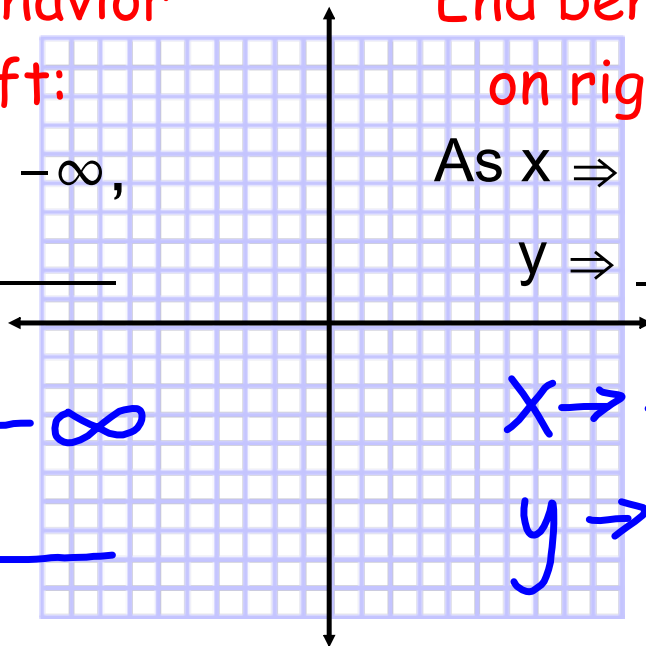
End behavior  
on right:

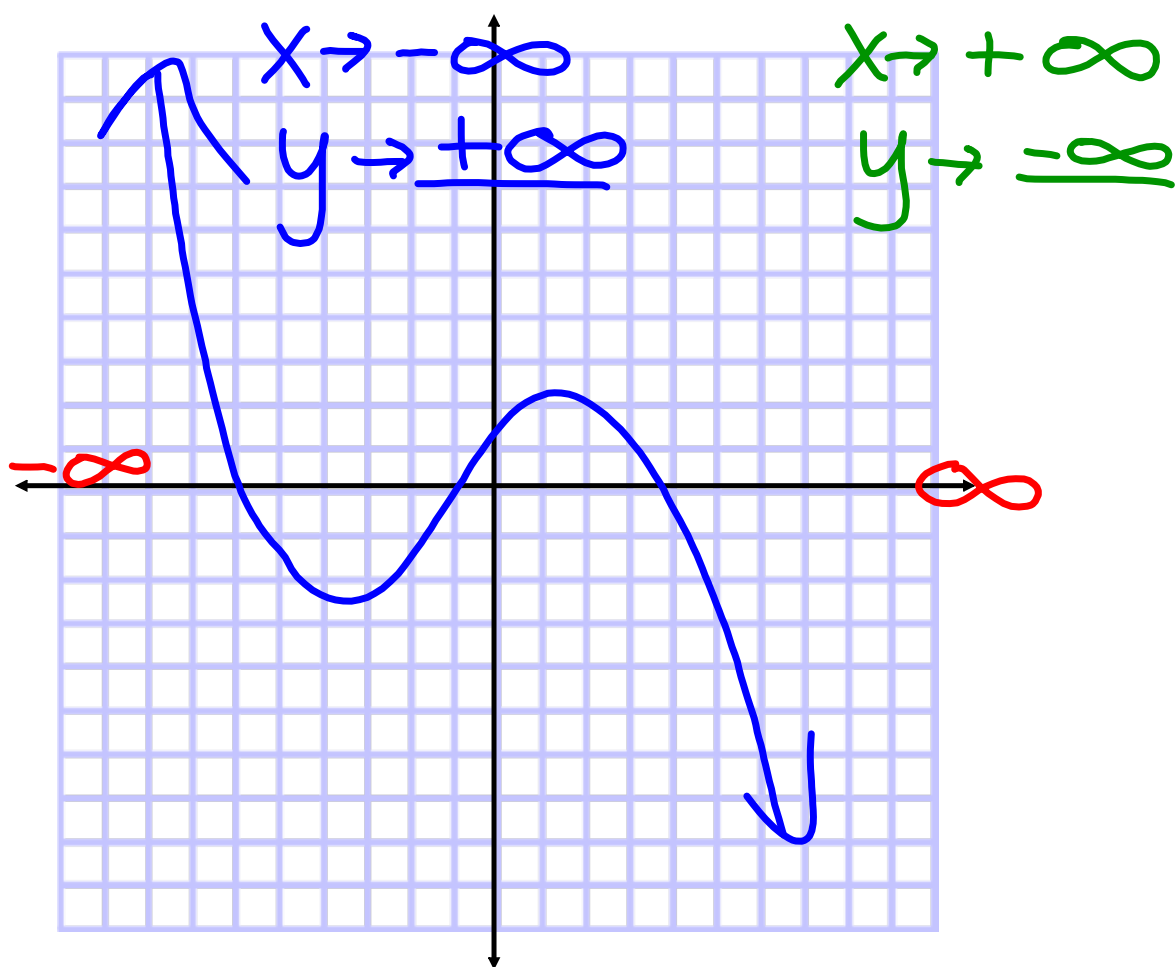
As  $x \Rightarrow \infty$ ,

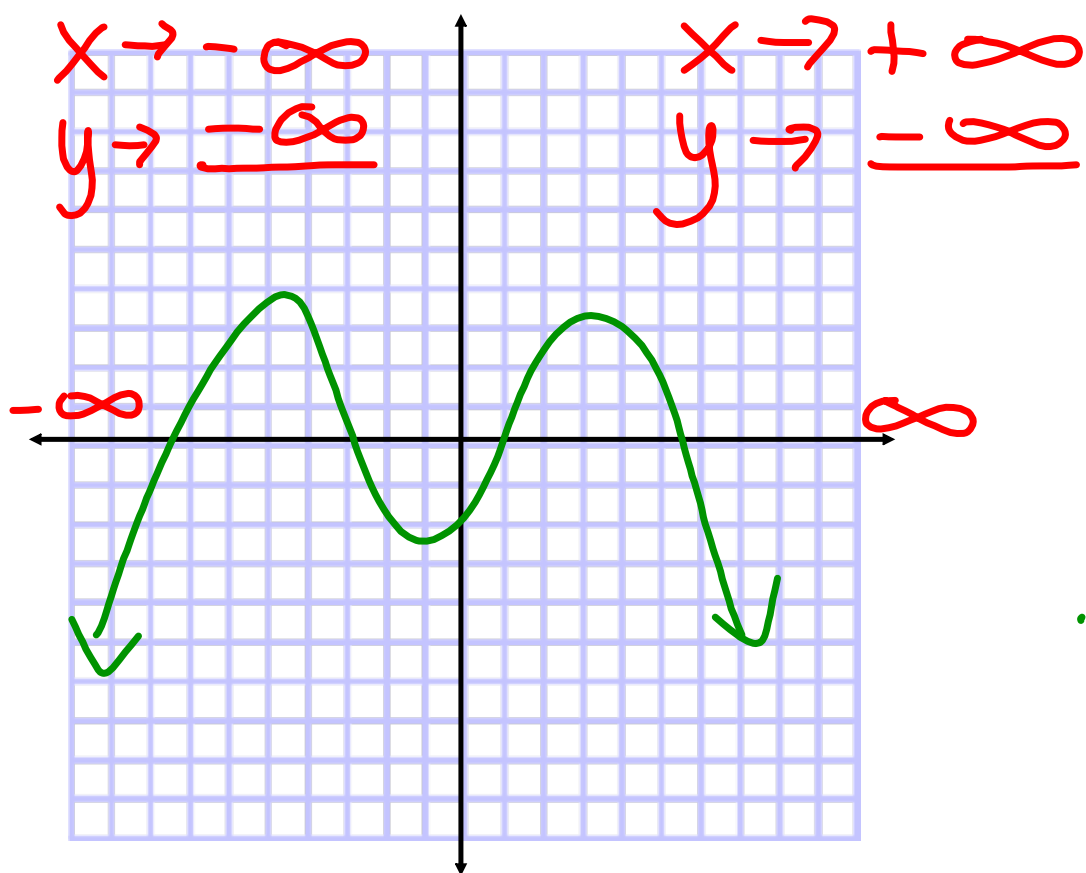
$y \Rightarrow$  \_\_\_\_\_

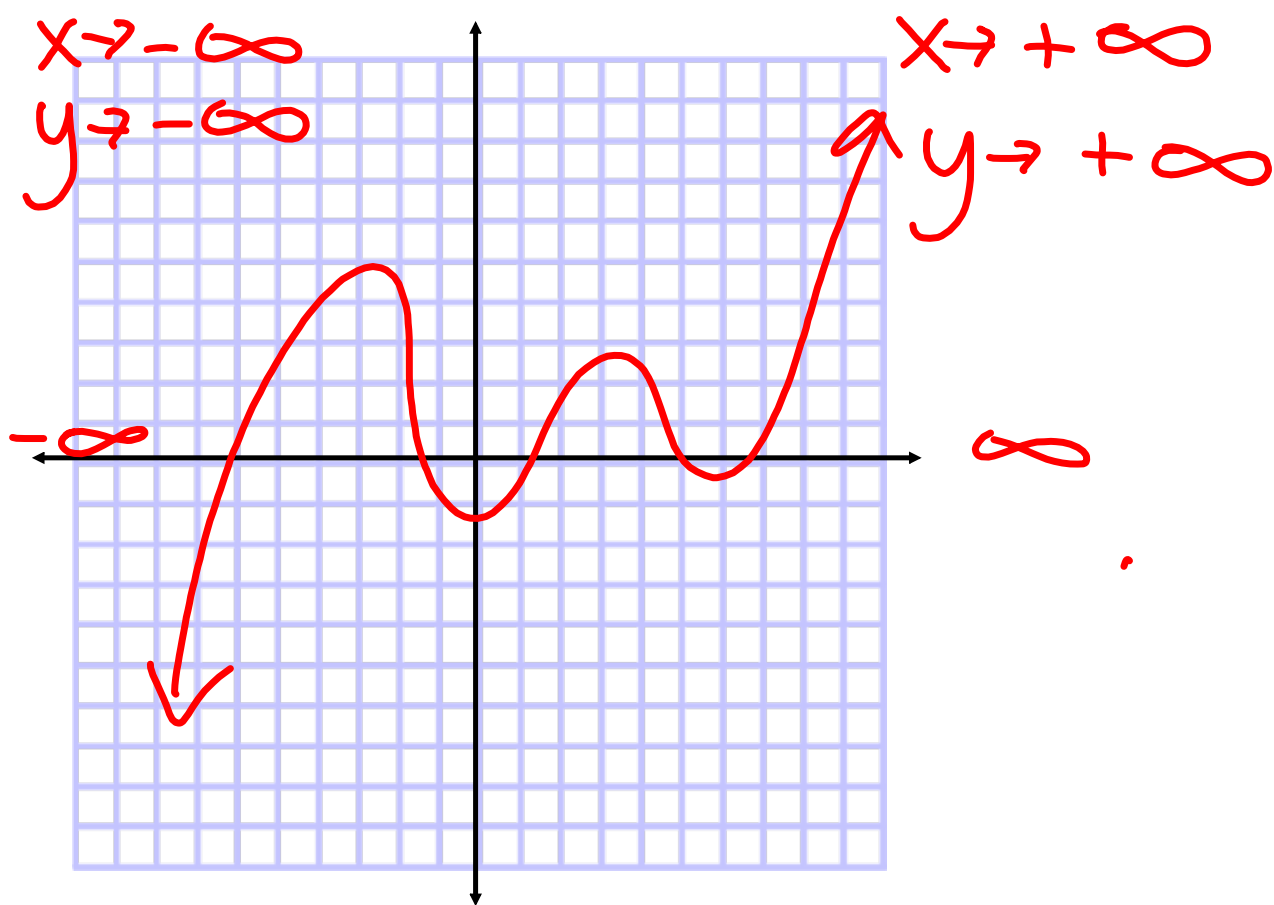
$x \rightarrow +\infty$

$y \rightarrow$  \_\_\_\_\_









Ex. B.

Domain:

Range:

Max:

Min:

X-Intercept:

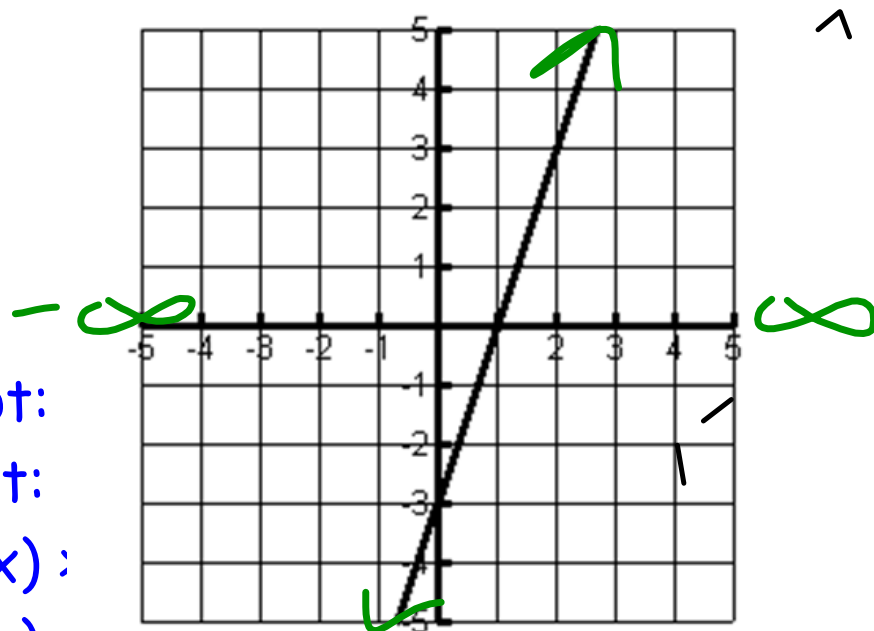
Y-Intercept:

When is  $f(x) >$ When is  $f(x) <$ 

Interval of Increase:

Interval of Decrease:

Constant Interval:



$$x \rightarrow -\infty \quad y \rightarrow -\infty$$

$$x \rightarrow +\infty \quad y \rightarrow +\infty$$

Ex. C.

Domain:

Range:

Max:

Min:

X-Intercept:

Y-Intercept:

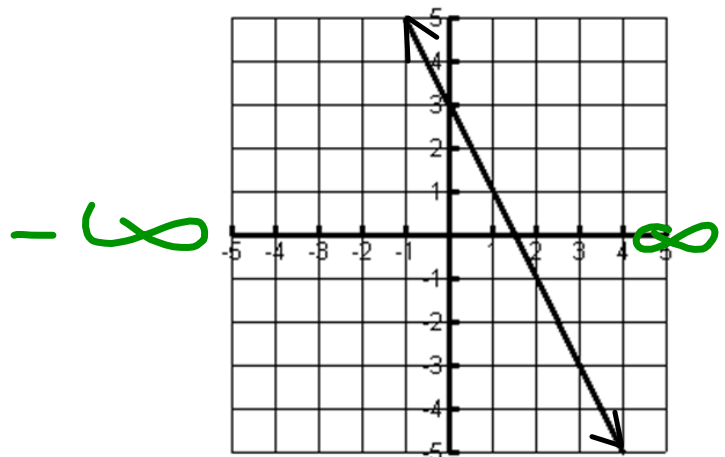
When is  $f(x) > 0$  ?

When is  $f(x) < 0$  ?

Interval of Increase:

Interval of Decrease:

Constant Interval:



$$\begin{aligned} X &\rightarrow -\infty & y &\rightarrow +\infty \\ X &\rightarrow +\infty & y &\rightarrow -\infty \end{aligned}$$