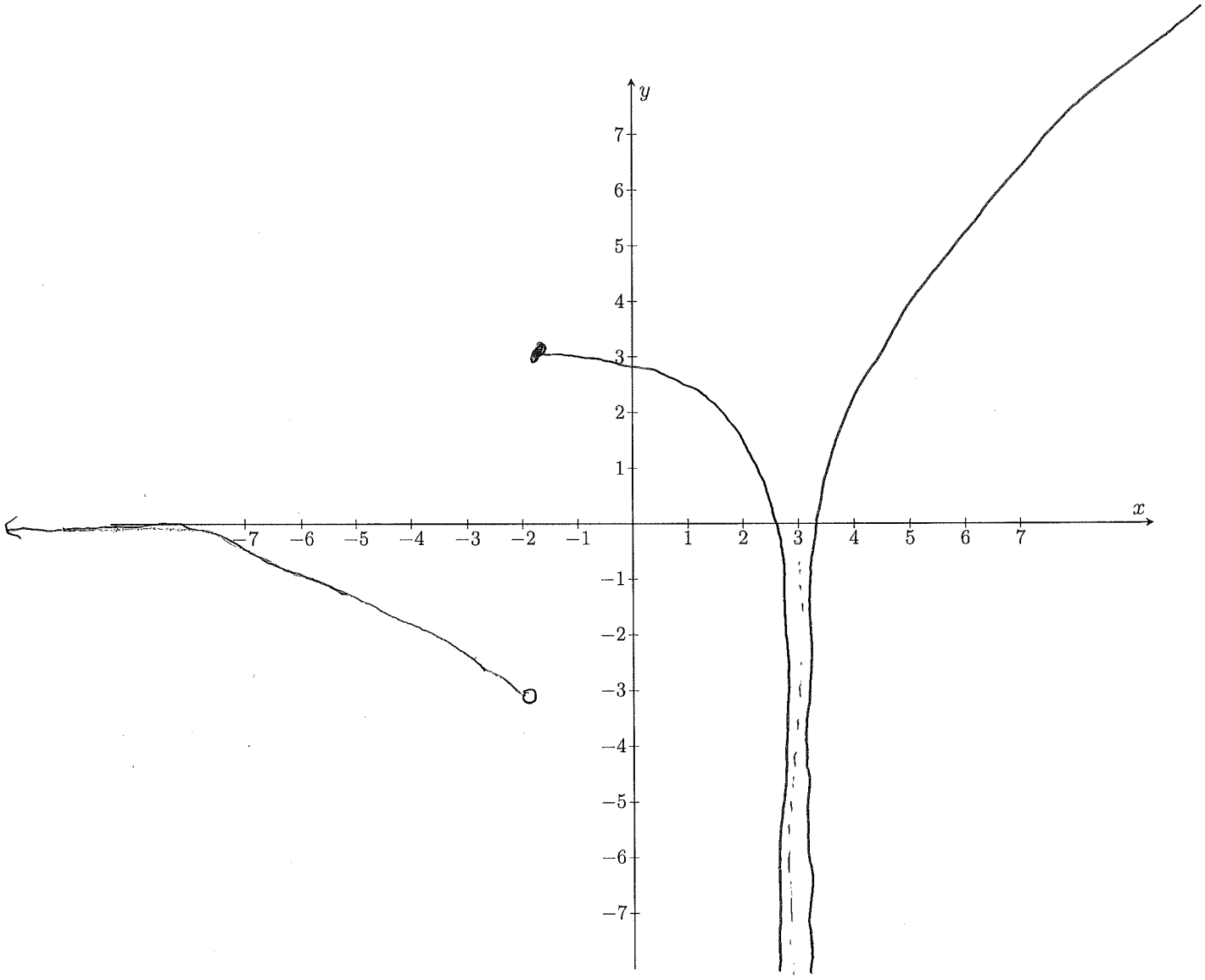
2.)

Sketch a graph $y = f(x)$ for a function f satisfying *all* of the following properties (you do not need to provide a formula for f unless you want to):

a.)

$\lim_{x\to-\infty} f(x) = 0$, $\lim_{x\to-2^+} f(x) = 3$, $\lim_{x\to-2^-} f(x) = -3$, $\lim_{x\to3} f(x) = -\infty$, f is continuous *from the right* at $x = -3$



b.)

$\lim_{x\to-\infty} f(x) = -3$, $\lim_{x\to-1^+} f(x) = -2$, $\lim_{x\to 0} f(x) = -\infty$, $\lim_{x\to 2} f(x) = 3$, $f(2) = 6$, $\lim_{x\to\infty} f(x) = 2$, there are only two real numbers at which f is *not* continuous.