

# TMATH 124am: Quiz 2

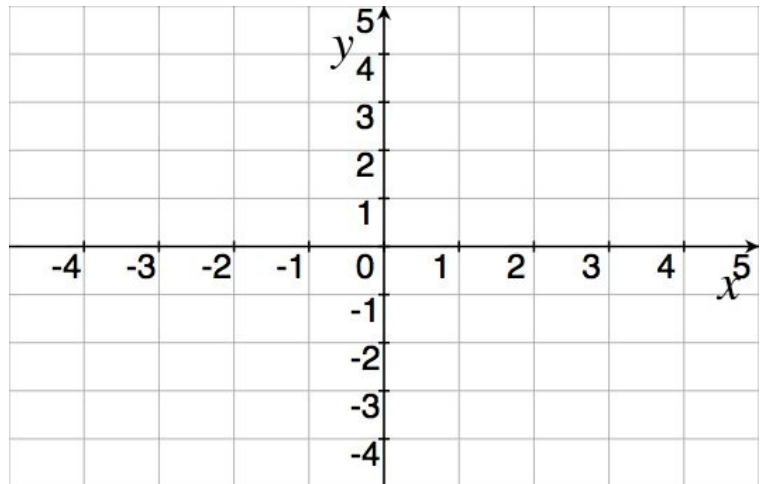
Show *all* your work (numerically, algebraically, or geometrically) for each and simplify. No credit is given without supporting work.

1. [3] (§2.5 #5) Sketch the graph of an example function  $f$  that satisfies the following conditions:

(a)  $\lim_{x \rightarrow 1^+} f(x) \neq \lim_{x \rightarrow 1^-} f(x)$

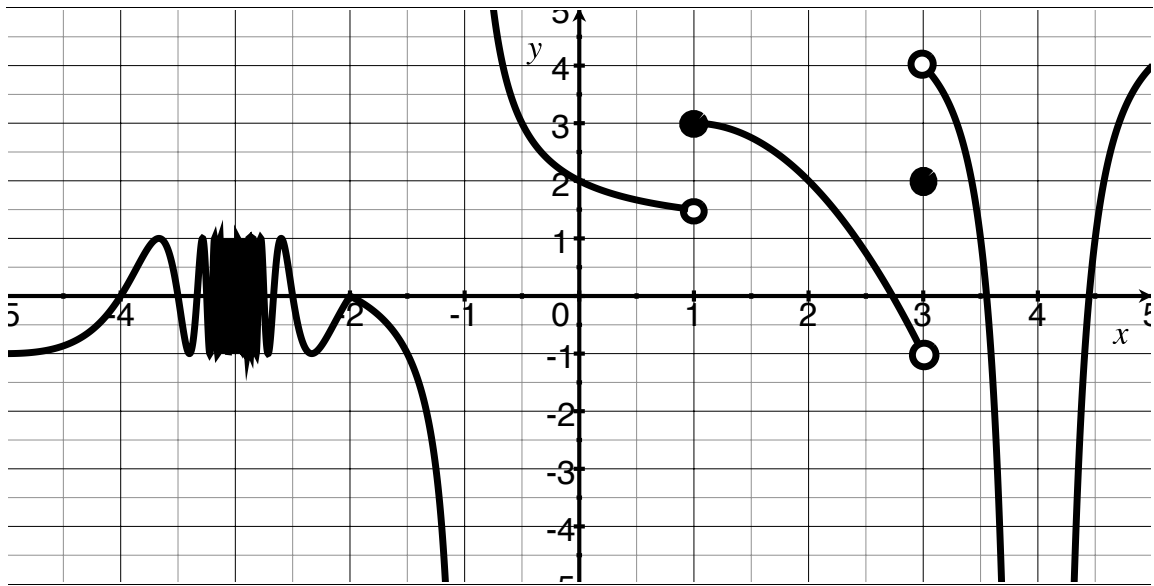
(b)  $f$  is discontinuous at  $-2$

(c)  $f$  is continuous from the right at  $-2$



2. [2] (WebHW3 #10) If we know  $3x - 5 \leq f(x) \leq x^2 - 3x + 4$  for all  $x \geq 0$ , find  $\lim_{x \rightarrow 3} f(x)$ .  
*Justify* your conclusions

3. The graph of a function  $R$  is given below:



(a) [3] (Con't wks) State the numbers at which  $R$  is discontinuous.

(b) [2] (§2.3 #2) Evaluate  $\lim_{x \rightarrow 1^+} [2R(x) - 5]$