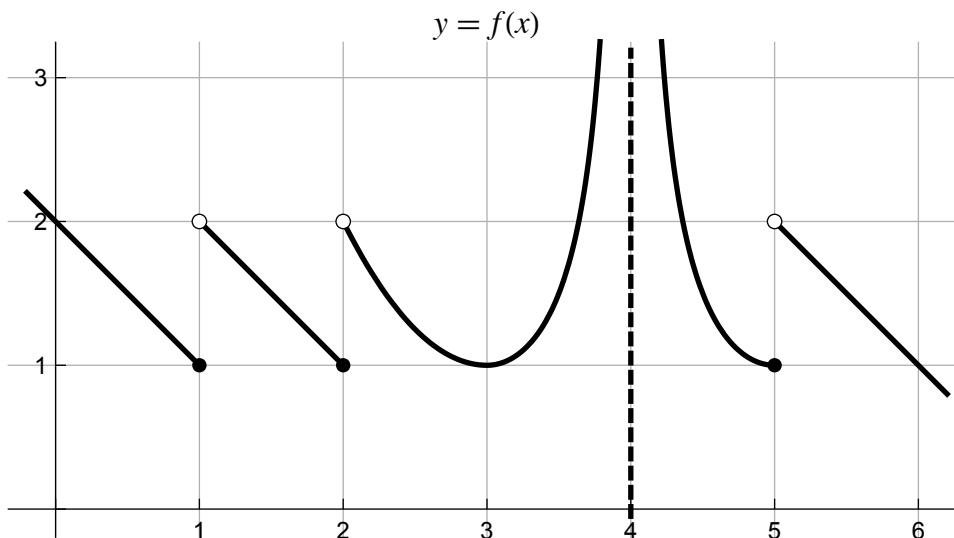


This is an open-book, open-notes quiz, and you may take as much time as you like. However, work alone; tutors, other students, internet, and so on are off limits. Write your answers on this quiz sheet and have it ready to turn in at the beginning of class on Tuesday, October 11.



(point 12) 1. Graph reading: Read each of the following values from the graph of  $f(x)$  above.

Answer with  $+\infty$  or  $-\infty$  if applicable.

Otherwise, if the limit or function value is undefined, just say so.

- $f(2)$
- $f(4)$
- $\lim_{x \rightarrow 1^-} f(x)$
- $\lim_{x \rightarrow 1} f(x)$
- $\lim_{x \rightarrow 4} f(x)$
- $\lim_{x \rightarrow 2} f(x)$

(point 4) 2. True/False I. Refer to the graph of the function  $f(x)$  above to answer these.

- \_\_\_ a.  $f$  is continuous on the closed interval  $[3, 4]$ .
- \_\_\_ b.  $f$  is continuous on the open interval  $(2, 3)$ .
- \_\_\_ c.  $f$  has a nonremovable discontinuity at  $x = 1$

(Go on to #3 on the back)

(point 4) 3. True/False II.

Assume that  $f$  is a *polynomial* function, with  $f(3) = -3$  and  $f(9) = 0$ .

\_\_\_\_\_ a.  $f$  must be continuous on  $(-\infty, +\infty)$ .

\_\_\_\_\_ b. There must be at least one value  $c$  in  $[3, 9]$  where  $f(c) = -2$ .

\_\_\_\_\_ c. There must be at least one value  $c$  in  $[3, 9]$  where  $f(c) = -4$ .