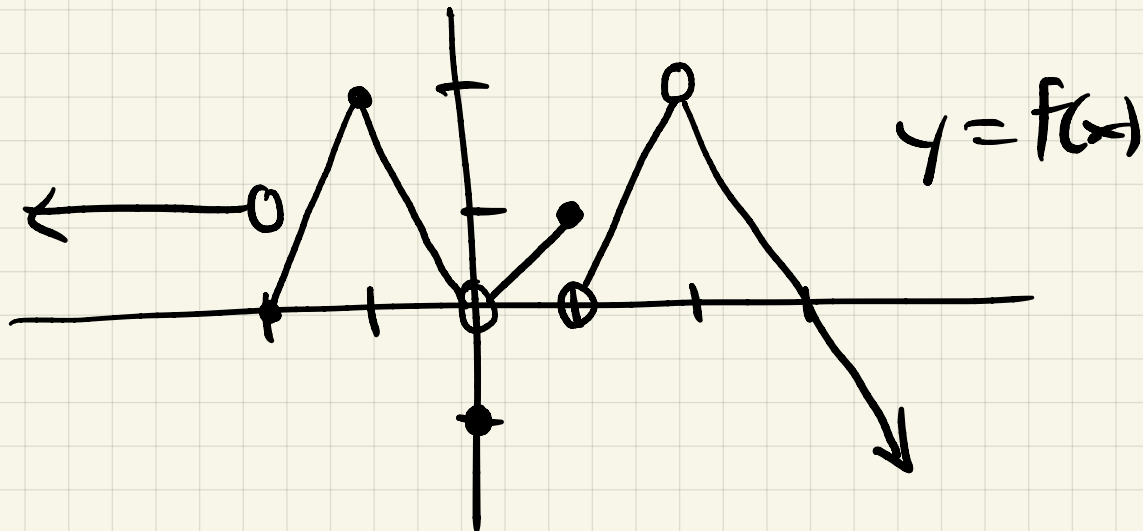


# Quiz 7

1.



a)  $\lim_{x \rightarrow 0^-} f(x) = 0$       b)  $\lim_{x \rightarrow 1^-} f(x) = 1$       c)  $\lim_{x \rightarrow 2^-} f(x) = 2$

d)  $\lim_{x \rightarrow 0^+} f(x) = 0$       e)  $\lim_{x \rightarrow 1^+} f(x) = 0$       f)  $\lim_{x \rightarrow 2^+} f(x) = 2$

g)  $\lim_{x \rightarrow 0} f(x) = 0$       h)  $\lim_{x \rightarrow 1} f(x)$  DNE      i)  $\lim_{x \rightarrow 2} f(x) = 2$

(j)  $f$  disc at  $x = -2, 0, 1, 2$

2.

$$\lim_{x \rightarrow 0^-} g = \lim_{x \rightarrow 0^-} -3 \left( \frac{\sin x}{x} \right) = -3$$

$$g(0) = 1 - 4 \cos 0 = 1 - 4 = -3$$

$$\lim_{x \rightarrow 0^+} g = \lim_{x \rightarrow 0^+} 1 - 4 \cos x = 1 - 4 = -3$$

all three equal  $\Rightarrow g$  continuous at  $c=0$ .