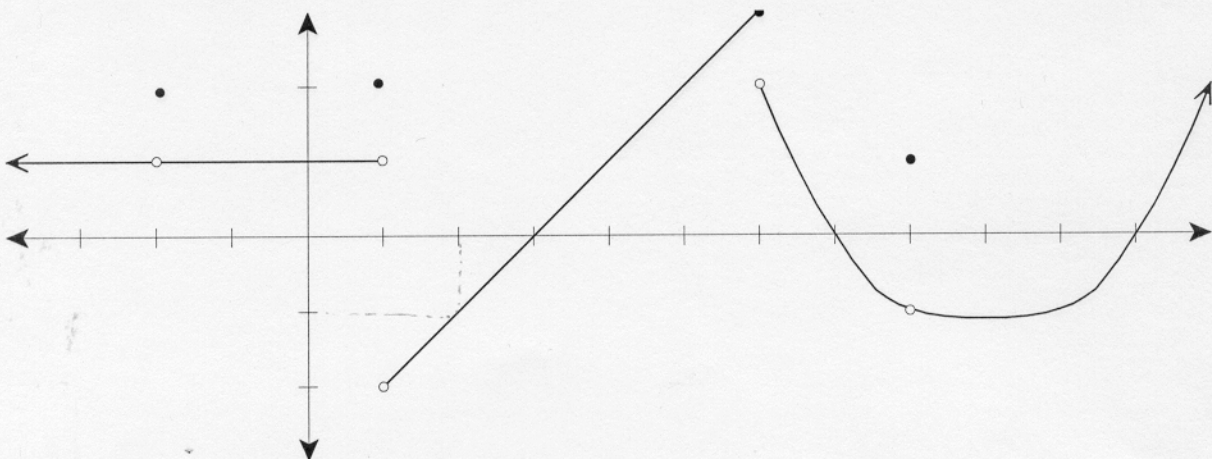


Each problem is worth 5 points. Clear and complete justification is required for full credit.



Use the graph of  $f(x)$  shown above to answer the following questions:

1. What is  $\lim_{x \rightarrow -2} f(x)$ ? 1 As  $x$  approaches  $-2$ , but  $f(-2)$  would be  $2$   
Yes.

2. What is  $\lim_{x \rightarrow 2^-} f(x)$ ? -1

3. What is  $\lim_{x \rightarrow 6} f(x)$ ? Does not exist  $\lim_{x \rightarrow 6^-} f(x) \neq \lim_{x \rightarrow 6^+} f(x)$

4. At which value(s) of  $x$  is  $f(x)$  not continuous, and why?

$$x = -2 \quad \lim_{x \rightarrow -2} f(x) \neq f(-2)$$

$$x = 1 \quad \lim_{x \rightarrow 1} f(x) \neq f(1)$$

$$x = 6 \quad \lim_{x \rightarrow 6^-} f(x) \neq \lim_{x \rightarrow 6^+} f(x)$$

$$x = 8 \quad \lim_{x \rightarrow 8} f(x) \neq f(8)$$

Excellent