Directions: Closed book, closed notes, no calculators.

Each problem is 10 points, for a total of 20 points.

By submitting this quiz you affirm that you agree with this statement: On my honor, I have neither given nor received unauthorized aid on this assignment, and I pledge that I am in compliance with the VCU Honor System.

1. Answer the questions about the function graphed below. (Short answer; no need to show work.)

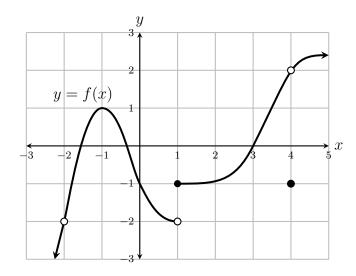
(a)
$$f(4) =$$

(b)
$$\lim_{x \to 4} f(x) =$$

(c)
$$\lim_{x \to 1^{-}} f(x) =$$

(d)
$$\lim_{x \to 1^+} f(x) =$$

(e)
$$\lim_{x \to -1} \sqrt{\frac{f(x) - 1}{4x}} =$$



2. Find:
$$\lim_{x\to 5} \frac{x^3 - x^2 - 20x}{x^2 - 7x + 10}$$

(You must show work to receive credit.)