Quiz 3
Show all your work
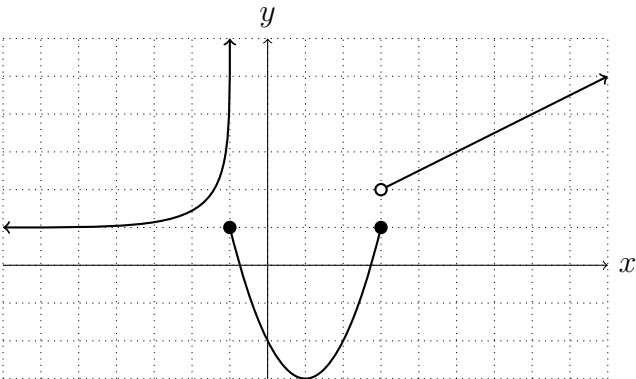
Problem 1: Answer the following questions according to the graph of $y = f(x)$ as shown. Note one hollow dot at $(3, 2)$ and one solid dot at $(3, 1)$.

a. $f(3) =$ [   ]

b. $\lim\limits_{x \to 3^-} f(x) =$ [   ]

c. $\lim\limits_{x \to 3^+} f(x) =$ [   ]

d. $\lim\limits_{x \to 3} f(x) =$ [   ]

e. $\lim\limits_{x \to \pi} \dfrac{f(x) - f(\pi)}{x - \pi} =$ [   ]

f. $\lim\limits_{x \to 1} \dfrac{f(x) + 3}{x - 1} =$ [   ]

g. $\lim\limits_{x \to -\infty} f(x) =$ [   ]

h. $\lim\limits_{x \to -1^-} f(x) =$ [   ]

Score: /8

Problem 2: Evaluate the following limit. Show all steps.

$$\lim_{x \to 4} \frac{x^2 - 5x + 4}{|4 - x|}$$

Score: /2