1. Which of the following most accurately describes the value of the following limit?

$$\lim_{x \to 2} \frac{x^2 - 5x + 6}{x^2 - 4}$$

(A) $1/4$

(B) $-1/4$

(C) ∞

(D) The limit does not exist

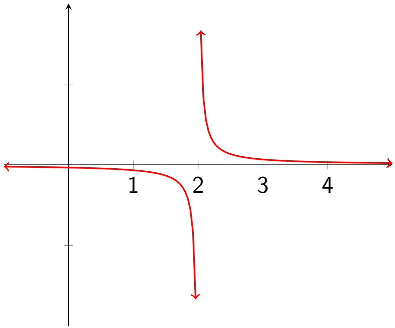
2. Which of the following is the most accurate description of the function f whose graph is depicted to the right?

(A) $\lim_{x \to 2} f(x) = \infty$.

(B) $\lim_{x \to 2} f(x) = -\infty$.

(C) $\lim_{x \to 2} f(x)$ does not exist.

(D) None of the above.



3. Which of the following most accurately describes the function f given by the following formula?

$$f(x) = \begin{cases} x^2 + 1 & \text{if } x \geq 0 \\ x - 1 & \text{if } x < 0 \end{cases}$$

(A) $\lim_{x \to 0^+} f(x) = 1.$

(B) $\lim_{x \to 0^-} f(x) = -1.$

(C) $\lim_{x \to 0} f(x)$ does not exist.

(D) All of the above.

4. True or False?

$$\lim_{x\to 2^+} \frac{1}{x^2-4} \text{ exists.}$$

5. True or False?

Let f be the function given by the following formula.

$$f(x) = \begin{cases} x^3 - 1 & \text{if } x \neq 0 \\ 0 & \text{if } x = 0 \end{cases}$$

Then $\lim_{x \to 0} f(x) = 0$.

6. True or False?

$$\lim_{x \to -1} (3x^4 - 2x^3 + 4x) = -3.$$

7. True or False?

$$\lim_{x \to -\infty} \frac{3x^2 + 20x}{2x^3 + 3x^2 - 29} = \infty.$$

8. True or False?

There exist functions f and g such that $\lim_{x \to 0} f(x) + g(x)$ exists but neither $\lim_{x \to 0} f(x)$ nor $\lim_{x \to 0} g(x)$ exist.