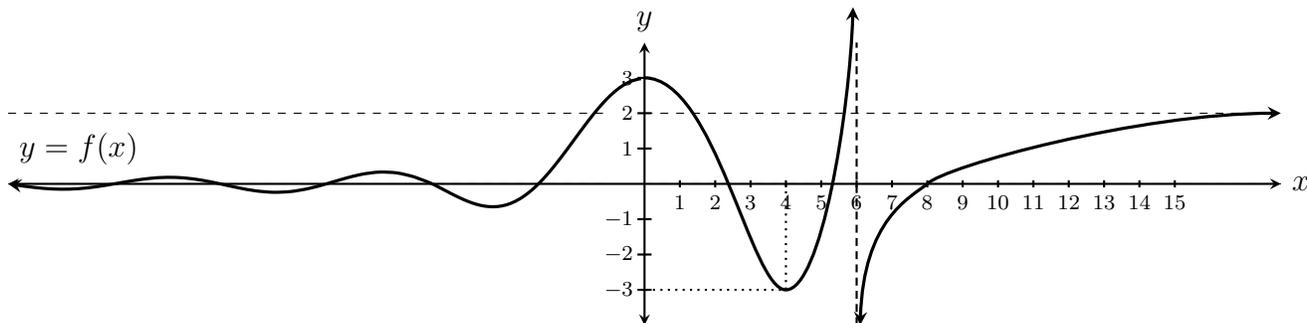


Name: _____

Directions: Find the limits. Show all steps. Simplify your answer.

1. (8 points) Answer the following questions about the function $y = f(x)$ graphed below.



(a) $\lim_{x \rightarrow -\infty} f(x) =$

(b) $\lim_{x \rightarrow \infty} f(x) =$

(c) $\lim_{x \rightarrow 6^-} f(x) =$

(d) $\lim_{x \rightarrow 6^+} f(x) =$

(e) $\lim_{x \rightarrow 0} \frac{1}{f(x) - 3} =$

(f) $\lim_{x \rightarrow 6} \frac{1}{f(x)} =$

(g) $\lim_{x \rightarrow 8^-} \frac{1}{f(x)} =$

(h) $\lim_{x \rightarrow 8^+} \frac{1}{f(x)} =$

2. (4 points) $\lim_{x \rightarrow \infty} e^{1/x} =$

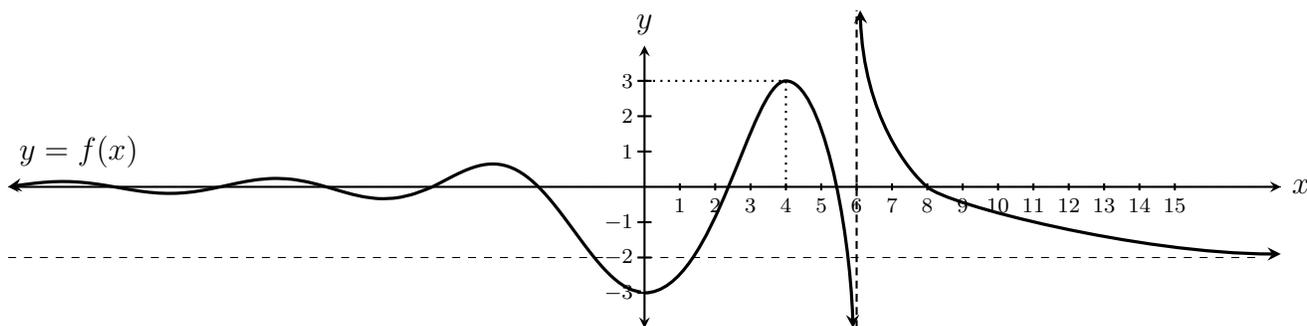
3. (4 points) $\lim_{x \rightarrow \infty} \frac{x^2 + 2x + 1}{-x^2 + 4x + 5} =$

4. (4 points) $\lim_{x \rightarrow 5^+} \frac{x^2 + 2x + 1}{-x^2 + 4x + 5} =$

Name: _____

Directions: Find the limits. Show all steps. Simplify your answer.

1. (8 points) Answer the following questions about the function $y = f(x)$ graphed below.



(a) $\lim_{x \rightarrow 6^-} f(x) =$

(b) $\lim_{x \rightarrow 6^+} f(x) =$

(c) $\lim_{x \rightarrow -\infty} f(x) =$

(d) $\lim_{x \rightarrow \infty} f(x) =$

(e) $\lim_{x \rightarrow 8^-} \frac{1}{f(x)} =$

(f) $\lim_{x \rightarrow 8^+} \frac{1}{f(x)} =$

(g) $\lim_{x \rightarrow 6} \frac{1}{f(x)} =$

(h) $\lim_{x \rightarrow 4} \frac{1}{f(x) - 3} =$

2. (4 points) $\lim_{x \rightarrow \infty} \ln\left(\frac{1}{x}\right) =$

3. (4 points) $\lim_{x \rightarrow 3^+} \frac{x^2 + 5x + 6}{x^2 - 9} =$

4. (4 points) $\lim_{x \rightarrow \infty} \frac{x^2 + 5x + 6}{x^2 - 9} =$