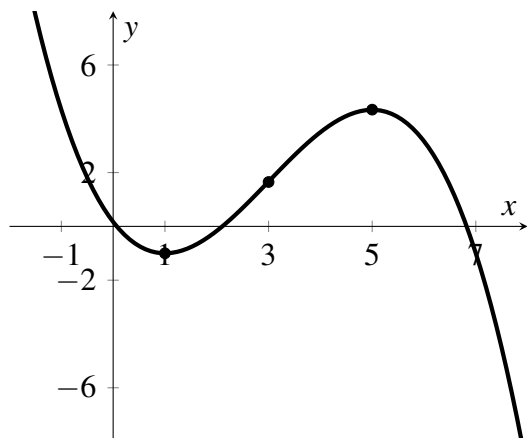


2. [8 points] Evaluate the following limits. Show your work!

a. $\lim_{x \rightarrow -\infty} \frac{x^2 + 1}{x^2 - 2x^3}$

b. $\lim_{x \rightarrow \infty} \frac{4x - 2}{\sqrt{5x^2 - 4}}$

3. [6 points] Based on the graph of the function $f(x)$ below, determine whether each value is positive, negative, zero, or undefined. You do not need to show your work.



a. $g'(1)$

b. $g''(1)$

c. $g'(3)$

d. $g''(3)$

e. $g'(5)$

f. $g''(5)$