

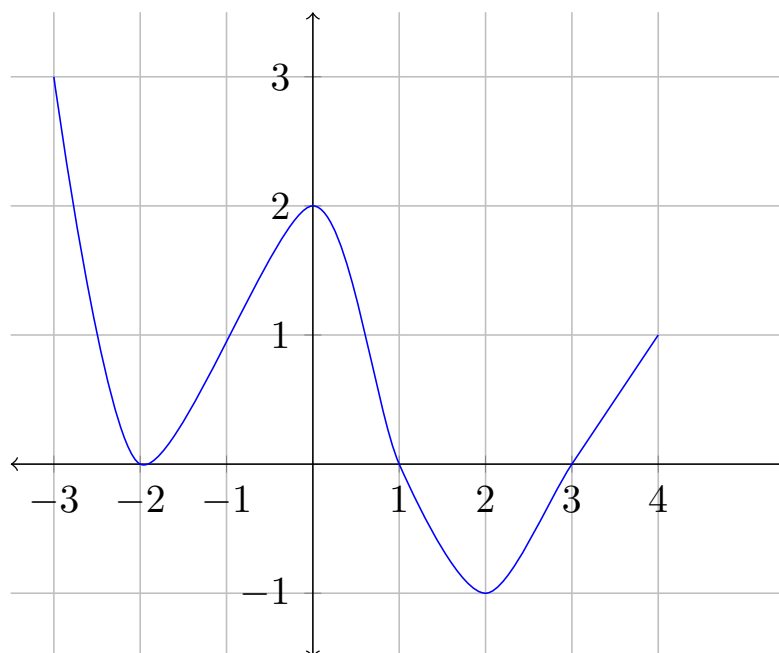
Please show **all** your work! Answers without supporting work will not be given credit.
Write answers in spaces provided.

Name: _____

1. [2 pts] Find the following limit:

$$\lim_{x \rightarrow \infty} \frac{100x^2 + 25x + 1}{81x^2 + 1}$$

2. [8 pt] Given the graph of $f'(x)$ below, answer the following question for $f(x)$.



- | | |
|-------------------------------------|--------------------------------------|
| (a) [1 pt] Critical Number(s): | (e) [1 pt] Relative Minimum Occurs: |
| (b) [1 pt] Increasing Interval(s): | (f) [1 pt] Concave Up Interval(s): |
| (c) [1 pt] Decreasing Interval(s): | (g) [1 pt] Concave Down Interval(s): |
| (d) [1 pt] Relative Maximum Occurs: | (h) [1 pt] Inflection Point(s): |