

NAME:

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Quiz 7

Consider the function:

$$f(x) = \frac{x^3}{x^2 - 3}.$$

- 1.** What is the domain of f ?
- 2.** Find the intervals where f is increasing and decreasing.
- 3.** Find the intervals where f is concave up, and concave down.
- 4.** Find the vertical, horizontal and slant asymptotes (if they exist).
- 5.** Sketch the graph of f . (Careful with any vertical asymptotes, you will need to find the side limits as well).