Quiz 7

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Problem 1. Consider the function
$$f(x) = \frac{3x^2 + 2x + 1}{x^2 - 1}.$$

(a) Find the vertical asymptote(s).

(b) Compute
$$\lim_{x \to \infty} f(x).$$

(c) Compute
$$\lim_{x \to -\infty} f(x).$$

(d) Find the horizontal aysmptote, if it exists.

(e) Does $f(x)$ have a slant asymptote? *Hint: look at the degree.*