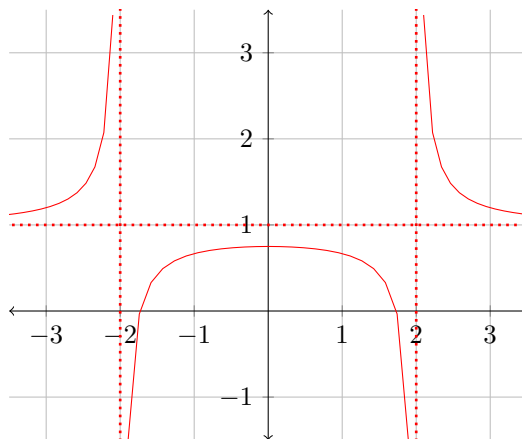


Please show **all** your work! Answers without supporting work will not be given credit.
Write answers in spaces provided.

Name: _____

1. Using the graph below, answer the following questions:



I. Determine the vertical asymptote(s).

$x =$ _____

II. Determine the horizontal/slant asymptote.

$y =$ _____

III. Using I and II, determine which function below represents the graph?

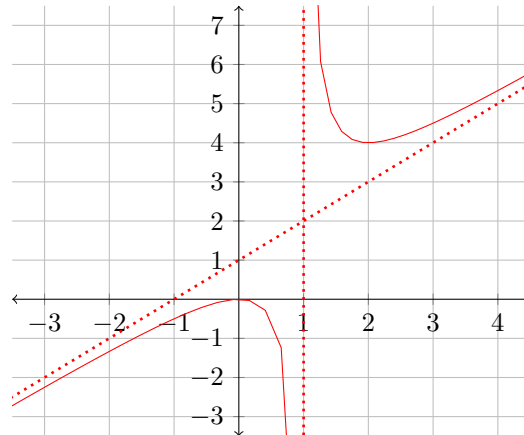
(a) $f(x) = \frac{x + 2}{x - 2}$

(b) $f(x) = \frac{x - 3}{(x - 2)(x + 2)}$

(c) $f(x) = \frac{x^2 - 4}{x - 1}$

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

2. Using the graph below, answer the following questions:



I. Determine the vertical asymptote(s).

$$x = \underline{\hspace{2cm}}$$

II. Determine the horizontal/slant asymptote.

$$y = \underline{\hspace{2cm}}$$

III. Using I and II, determine which function below represents the graph?

(a) $f(x) = \frac{2x^2 + 1}{x - 1}$

(b) $f(x) = \frac{x^2}{(x - 1)(x + 1)}$

(c) $f(x) = \frac{x^2}{x - 1}$

(d) $f(x) = \frac{x - 1}{x^2}$