Rational Functions Worksheet - G12\Gen

Name: _____

1. Identify the vertical asymptote of the function $f(x) = \frac{x^2-1}{x-5}$

A) x = 1

C) x = 5

B) x = -1

D) x = 0

2. What is the horizontal asymptote of the function $f(x) = \frac{7}{2x+8}$.

A) y = 7

C) y = -4

B) y = 0

D) No horizontal asymptote

3. Determine the horizontal asymptote for $f(x) = \frac{6x-2}{3x+1}$

A) x = 2

C) y = 0

B) y = -2

D) y = 2

4. Which statement is true regarding the horizontal asymptote of $f(x) = \frac{x^3+4}{x-2}$

A) y = 1

C) The horizontal asymptote is y = 2

B) y = 0

D) There is no horizontal asymptote.

5. Which of the following functions has an oblique (slant) asymptote?

A) $f(x) = \frac{x+1}{x-3}$

C) $f(x) = \frac{x^3-1}{x+4}$

B) $f(x) = \frac{x^2+5x+1}{x+2}$

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