

## 10-3 Asymptotes (Horizontal and Vertical only)

Name: \_\_\_\_\_

Time> Start: \_\_\_\_\_ Finish: \_\_\_\_\_ Total Time = \_\_\_\_\_

For 1- 10, determine the horizontal and vertical asymptotes for each function.

If none exists for the function, just write "none."

1.  $y = \frac{x}{x^2 - x - 12}$       H = \_\_\_\_\_      V = \_\_\_\_\_

2.  $y = \frac{x+5}{x^2 + 3x + 2}$       H = \_\_\_\_\_      V = \_\_\_\_\_

3.  $y = \frac{3x^4 + 4x - 2}{x}$       H = \_\_\_\_\_      V = \_\_\_\_\_

4.  $y = \frac{x^6 + x - 6}{x - 2}$       H = \_\_\_\_\_      V = \_\_\_\_\_

5.  $y = \frac{x^4 + 5x + 3}{x + 2}$       H = \_\_\_\_\_      V = \_\_\_\_\_

6.  $y = \frac{x^2}{x - 6}$       H = \_\_\_\_\_      V = \_\_\_\_\_

7.  $y = \frac{x}{x^2 - x - 12}$       H = \_\_\_\_\_      V = \_\_\_\_\_

8.  $y = \frac{5x}{x^2 - 4}$       H = \_\_\_\_\_      V = \_\_\_\_\_

9.  $y = \frac{6x + 5}{3x - 1}$       H = \_\_\_\_\_      V = \_\_\_\_\_

10.  $y = \frac{8x^2 + 4x - 2}{x^2 - 25}$       H = \_\_\_\_\_      V = \_\_\_\_\_