Instructions  Please write your name in the upper right-hand corner of the page.
If you need more space to write your solutions, you may use the back of the page or a separate sheet of paper.

1. How is the word “asymptote” spelled?

2. The line that passes through the two points (1, -1) and (4, 5) has the standard Cartesian equation $y = 2x - 3$. Find an equation for this line either in the vector form $\vec{r}(t) = \vec{r}_0 + t\vec{v}$ or in the parametric form $x(t) = x_0 + at$ and $y(t) = y_0 + bt$.

3. Draw a graph that illustrates a function $f$ with the properties that $\lim_{x \to 2^-} f(x) = 1$ and $\lim_{x \to 2^+} f(x) = 3$.

\[ f(x) \]

\[ \begin{array}{c}
  1 \\
  2 \\
  3 \\
  3 \\
  2 \\
  1 \\
\end{array} \]

\[ \begin{array}{c}
  1 \\
  2 \\
  3 \\
\end{array} \]

4. According to the precise definition of a limit, the meaning of the symbols “$\lim_{x \to a} f(x) = L$” is that for every positive number $\varepsilon$ there corresponds a positive number $\delta$ such that [fill in the blanks]

\[ \text{[fill in the blanks]} \text{ whenever } \text{[fill in the blanks]} \].