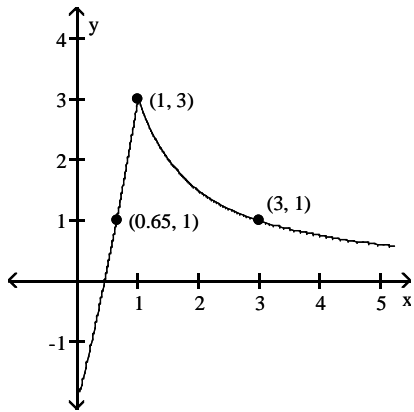


**MATH 232 - Calculus for Business
Homework #1**

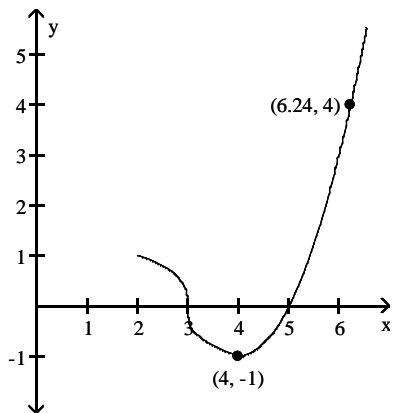
1) Find: $\lim_{x \rightarrow 1} f(x)$

1) _____



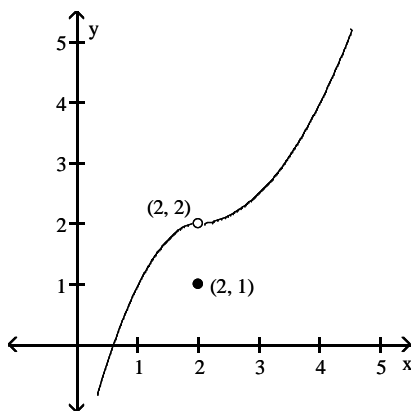
2) Find: $\lim_{x \rightarrow 4} f(x)$

2) _____



3) Find: $\lim_{x \rightarrow 2} f(x)$

3) _____



4) Find: $\lim_{x \rightarrow 3} (2x^2 - 4x + 3)$

4) _____

5) Find: $\lim_{x \rightarrow -2} \frac{x+2}{x^2-3}$ 5) _____

6) Find: $\lim_{x \rightarrow 2} \frac{x^2-5x+2}{3x-4}$ 6) _____

7) Find: $\lim_{x \rightarrow -2} \frac{x^2+4x+4}{x^2-4}$ 7) _____

8) If $f(x) = \begin{cases} 3-x, & \text{if } x > 2 \\ 3x-5, & \text{if } x < 2 \end{cases}$, find $\lim_{x \rightarrow 2} f(x)$. Hint: Sketch the graph of f . 8) _____

9) Find the value(s) of x for which $f(x) = \frac{2x-3}{4x+8}$ is discontinuous. 9) _____

10) Let $f(x) = \frac{x(x+1)}{x^2-1}$. The only value(s) of x for which f is discontinuous is (are) 10) _____

11) Find: $\lim_{x \rightarrow \infty} \frac{4}{2x+3}$. If the limit does not exist, so state or use the symbol ∞ or $-\infty$ if appropriate. 11) _____

12) Find: $\lim_{x \rightarrow \infty} \frac{4x^4-2x^2-3}{x^2-3}$. If the limit does not exist, so state or use the symbol ∞ or $-\infty$ if appropriate. 12) _____

13) Find: $\lim_{x \rightarrow \infty} \frac{4x^2-6x}{x^2+4x}$. If the limit does not exist, so state or use the symbol ∞ or $-\infty$ if appropriate. 13) _____