

2.3-Analytic Computation of Limits

Properties of Limits: (pp 91-93. Basis for the techniques used in the following examples.)

Examples:

$$\lim_{x \rightarrow 4} \frac{x^2 - 3x - 4}{2x^2 - 9x + 4}$$

$$\lim_{x \rightarrow 1} (\sqrt{x})\mathbf{i} + (4x - 9)\mathbf{j}$$

$$\lim_{x \rightarrow 9} \frac{\sqrt{x} - 3}{9 - x}$$

$$\lim_{h \rightarrow 0} \frac{\frac{2}{x+h} - \frac{2}{x}}{h}$$

$$\lim_{x \rightarrow 0} x^2 \sin\left(\frac{1}{x}\right)$$

On Your Own: #3, 5, 6, 7, 13, 19, 23, 27, 39, 41, 45, 55, 67, 71