

Limits

Technical Mathematics for Food Technology, MATH 1441

Find the following limits.

$$\lim_{x \rightarrow 4} (\sqrt{x} - 2 - (x - 4)) \quad (1)$$

$$\lim_{x \rightarrow 0} (\ln x) \quad (2)$$

$$\lim_{x \rightarrow 3} \frac{x^3 - 5}{(x - 3)^2} \quad (3)$$

$$\lim_{x \rightarrow 0} \frac{x^2 - 6x + 9}{x^2} \quad (4)$$

$$\lim_{x \rightarrow 2} \frac{3x - 4}{(x - 2)^2} \quad (5)$$

$$\lim_{x \rightarrow \pi} \frac{\cos 2x}{(\pi - x)^2} \quad (6)$$

$$\lim_{x \rightarrow 0} \frac{1}{\sqrt{1 - \cos x}} \quad (7)$$

$$\lim_{x \rightarrow 5} \frac{x}{x^2 - 25} \quad (8)$$

$$\lim_{x \rightarrow \infty} \arctan x \quad (9)$$

$$\lim_{x \rightarrow -1} \frac{2x^2 - x - 3}{x + 1} \quad (10)$$

$$\lim_{x \rightarrow -3} \frac{x^2 + 5x + 6}{x^2 - x - 12} \quad (11)$$

$$\lim_{x \rightarrow -4} \frac{\sqrt{x^2 + 9} - 5}{x + 4} \quad (12)$$