SI Session: June 12th , 2008
Mondays – Thursdays
12:30 PM – 2:00 PM
Room 1229

Prof. Stockton : Calculus I
Summer I 2008
SI Leader : Neil Jody

[1] Find the vertical asymptotes (if any) of the graph of the function..

(a) $h(x) = \dfrac{x^2 - 4}{x^3 + 2x^2 + x + 2}$

(b) $h(t) = \dfrac{t^2 - 2t}{t^4 - 16}$

(c) $g(\theta) = \dfrac{\tan\theta}{\theta}$

[2] Find the limit.

(a) $\lim_{x \to -\frac{1}{2}^{+}} \dfrac{6x^2 + x - 1}{4x^2 - 4x - 3}$

(b) $\lim_{x \to 0^{-}} \left(x^2 - \dfrac{1}{x} \right)$

(c) $\lim_{s \to 0} \dfrac{\left(\dfrac{1}{\sqrt{1+s}} \right) - 1}{s}$

(d) $\lim_{x \to \frac{\pi}{2}^+} \frac{-2}{\cos x}$

(e) $\lim_{x \to 0} \frac{x+2}{\cot x}$

(f) $\lim_{x \to \frac{1}{2}} x^2 \tan \pi x$

(g) $\lim_{x \to 0^-} \frac{\cos^2 x}{x}$

[3] Find the limit.

(a) $\lim_{x \to +\infty} \left(4 + \frac{3}{x} \right)$

(b) $\lim_{x \to -\infty} \frac{x}{\sqrt{x^2 + 1}}$

(c) $\lim_{x \to -\infty} \frac{-3x + 1}{\sqrt{x^2 + x}}$

(d) $\lim_{x\to+\infty} \dfrac{x-\cos x}{x}$

(e) $\lim_{x\to+\infty} \cos\left(\dfrac{1}{x}\right)$

(f) $\lim_{x\to\infty} \dfrac{5x^3+2x-1}{4-x^2}$

(g) $\lim_{x\to-\infty} \dfrac{2x-3}{\sqrt{3+2x^2}}$

(h) $\lim_{x\to\infty} \dfrac{3x^2 - 5x}{4 - 2x^3}$

(i) $\lim_{x\to\infty} \dfrac{\sin\sqrt{x}}{\sqrt{x}}$

(j) $\lim_{x\to-\infty} \dfrac{|x+2|}{2x+3}$

(k) $\lim_{x\to-\infty} \dfrac{x}{\sqrt{x^2+1}}$

(l) $\lim_{x\to-\infty} \dfrac{\sqrt{5x^2-2}}{x+3}$