4.5 Limits at Infinity

Name: Date: June 9, 2015

P 20. Find the limit $\lim\limits_{x \to -\infty} \left(\dfrac{5}{x} - \dfrac{x}{3} \right)$

P 22. Find the limit $\lim\limits_{x \to -\infty} \dfrac{4x^2 + 5}{x^2 + 3}$

P 24. Find the limit $\lim\limits_{x \to \infty} \dfrac{5x^3 + 1}{10x^3 - 3x^2 + 7}$

P 26. Find the limit $\lim\limits_{x \to -\infty} \dfrac{x}{\sqrt{x^2+1}}$

P 28. Find the limit $\lim\limits_{x \to \infty} \dfrac{5x^2+2}{\sqrt{x^2+3}}$

P 32. Find the limit $\lim\limits_{x \to -\infty} \dfrac{2x}{(x^6-1)^{1/3}}$

P 34. Find the limit $\lim\limits_{x \to \infty} \cos \dfrac{1}{x}$

P 36. Find the limit $\lim\limits_{x \to \infty} \dfrac{x - \cos x}{x}$

P 38. Find the limit $\lim\limits_{x \to \infty} \dfrac{8}{4 - 10^{-x/2}}$

P 40. Find the limit $\lim\limits_{x\to\infty} \left[\dfrac{5}{2} + \ln\left(\dfrac{x^2 + 1}{x^2} \right) \right]$

P 52. Find the limit $\lim\limits_{x\to\infty} \left(4x - \sqrt{16x^2 - x} \right)$