WORKSHEET 3 ¾
CALCULUS I LIMITS BLOWING UP OR BLOWING DOWN
DR. M. P. M. M. MCLOUGHLIN

Reduce numerical results. If an answer *does not exist*, write **DNE** in the corresponding answer blank!

1. Find the following limits if they exist

A. $\lim_{x\to\infty}\left(\frac{21x^2-19x+2}{7x^3-x^2}\right)$

B. $\lim_{x\to\infty}\left(\frac{7x^3-x^2}{21x^2-19x+2}\right)$

C. $\lim_{x\to\infty}\left(\frac{5x^3-7x}{4x^3-x^2-2x+5}\right)$

D. $\lim_{x\to-\infty}\left(\frac{5x^3-7x}{4x^3-x^2-2x+5}\right)$

A couple of problems that are a tad trickier (see what you think) . . .

E. $\lim_{x\to\infty}\left(\frac{\sqrt{x^4-x^2}}{21x^2-19x+2}\right)$

F. $\lim_{x\to-\infty}\left(\frac{\sqrt{x^4-x^2}}{21x^2-19x+2}\right)$

G. $\lim_{x\to\infty}\left(\frac{\sqrt{9x^2+7}}{2x-1}\right)$

H. $\lim_{x\to-\infty}\left(\frac{\sqrt{9x^2+7}}{2x-1}\right)$