Sudoku Puzzle with Limits
A Puzzle by David Pleacher

Solve the 28 limit problems below and place the answer in the corresponding cell (labeled A, B, C, … Y, Z, a, b). Your answers should be integers from 1 to 9 inclusive. Then solve the resulting SUDOKU puzzle.

The rules of Sudoku are simple.
Enter digits from 1 to 9 into the blank spaces.
Every row must contain one of each digit.
So must every column, and so must every 3x3 square.
Each Sudoku has a unique solution that can be reached logically without guessing.

A. $\lim\limits_{x \to 1} 3x$

B. $\lim\limits_{x \to 2} (2x+5)$

C. $\lim\limits_{x \to 2} (2x^2 - 2x + 4)$

D. $\lim\limits_{x \to 3} \dfrac{x+2}{x-2}$

E. $\lim\limits_{x \to 7} (9)$

F. $\lim\limits_{x \to 4} \dfrac{-4(x^2 - 11x + 28)}{x^2 - 4x}$

G. $\lim\limits_{x \to \frac{\pi}{2}} 2\tan\left(\dfrac{x}{2}\right)$

H. $\lim\limits_{x \to -2} \left(\dfrac{x^2 - 4}{x^2 + 4} - \dfrac{14}{x}\right)$

I. $\lim\limits_{h \to 0} \left(\dfrac{(2+h)^2 - 2^2}{h}\right)$

J. $\lim\limits_{x \to 2} \left(\dfrac{4 - x^2}{3 - \sqrt{x^2 + 5}}\right)$

K. $\lim\limits_{k\to\infty}\left(\dfrac{10k-2}{2k+7}\right)$

L. $\lim\limits_{x\to4}\sqrt{25-x^2}$

M. $\lim\limits_{x\to\pi}\left(12\sin\left(\dfrac{x}{6}\right)\right)$

N. $\lim\limits_{p\to\infty}\left(\dfrac{16p^2-10p-2}{5-2p+2p^2}\right)$

O. $\lim\limits_{x\to2}\left(\dfrac{x^2-4}{x-2}\right)$

P. $\lim\limits_{x\to4}\left(\dfrac{x^2-x-12}{x-4}\right)$

Q. $\lim\limits_{x\to-1}\dfrac{2x^2+7x+5}{x+1}$

R. $\lim\limits_{x\to0}\dfrac{16\left(\sqrt{1+x}-1\right)}{x}$

S. $\lim\limits_{x\to-4}\dfrac{-3x-23}{2x-3}$

T. $\lim\limits_{x\to2}\left(\dfrac{x^2-1}{x-1}\right)$

U. $\lim\limits_{x\to3}\left(\dfrac{2x^3-54}{x^2-9}\right)$

V. $\lim\limits_{x\to-1}\left(\dfrac{2x^2+8x+6}{x^2+3x+2}\right)$

W. $\lim\limits_{x\to1}\left(\dfrac{2x-2}{\sqrt{x^2+3}-2}\right)$

X. $\lim\limits_{x \to +\infty} \left(\left(x^2 + 5 \right) + \left(2 - x^2 \right) \right)$

Y. $\lim\limits_{x \to 4} \dfrac{x^2 - 7x + 12}{x - 4}$

Z. $\lim\limits_{x \to 1} \left(\dfrac{\dfrac{3x}{1-x}}{\dfrac{1}{1-x^2}} \right)$

a. $\lim\limits_{x \to \infty} \left(\dfrac{2 - 2x^2 + 9x^4}{x^4 + 3x^3 - 2x} \right)$

b. $\lim\limits_{x \to 3} \dfrac{-x^2 + 7x - 12}{x - 3}$

A			B					
			C		D		E	F
G		H	I				J	
			K			L		
M	N						O	P
	Q				R			
	S			T		U		V
W	X		Y		Z			
					a			b

Here is a blank SUDOKU board for you to use:

Solution to the Sudoku With Limits Puzzle

A = 3
B = 9
C = 8
D = 5

E = 9
F = 3
G = 2
H= 7

I = 4
J = 6
K = 5
L = 3

M = 6
N = 8
O = 4
P = 7

Q = 3
R = 8
S = 1
T = 3

U = 9
V = 4
W = 4
X = 7

Y = 1
Z = 6
a = 9
b =1

3	5	8	9	6	7	4	1	2
1	6	4	8	2	5	7	9	3
2	9	7	3	4	1	8	6	5
9	2	1	5	7	4	3	8	6
6	8	5	2	9	3	1	4	7
7	4	3	6	1	8	5	2	9
8	1	6	7	3	2	9	5	4
4	7	9	1	5	6	2	3	8
5	3	2	4	8	9	6	7	1