NUMBRIX

A NEW MATH PUZZLE BY MARILYN vos SAVANT

From: http://www.parade.com/askmarilyn/numbrix/071308

Directions:
Starting anywhere, fill in the blank squares with the missing numbers so they make a path in numerical order, 1 through 49. You can work horizontally or vertically in any direction. Diagonal paths are not allowed.

SAMPLE PUZZLE from Ask Marilyn [14 July 2008]

3	2	47	48	49	40	39
4						38
5						37
20						34
21						33
22						32
23	24	27	28	29	30	31

Solution:

3	2	47	48	49	40	39
4	1	46	45	42	41	38
5	6	7	44	43	36	37
20	19	8	9	10	35	34
21	18	17	16	11	12	33
22	25	26	15	14	13	32
23	24	27	28	29	30	31

Try this one on your own!

Numbrix-7 (From July 13 Issue of PARADE - view the solution)

1	2	3	4	7	8	9
28						10
29						13
32						14
33						15
46						16
47	48	49	42	41	18	17

Now the numbers needed are 1 through 64

Numbrix-8

62	63	64	1	2	7	8	9
61							10
48							13
47							14
44							15
43							16
40							17
39	38	37	32	31	30	19	18

Limit and Derivative Numbrix

Solve the clues which will give you a number from 1 to 49 and place your solution in the appropriate box. Then solve the Numbrix puzzle.

Remember: Complete 1-49 so the numbers follow a horizontal or vertical path. [No diagonal.]

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

Letter	Clue	Letter	Clue
A	$\lim_{x\to\frac{\pi}{4}} \tan x$	T	$f'(3)$ if $f(x) = 2x^3 - 8x$
B	$f'(1)$ if $f(x) = x^2$	U	$f'(2)$ if $f(x) = x^3 + 4x^2 + 5x$
C	$\lim_{x\to 0} 3\cos x$	V	$\lim_{x\to 32} e^{\ln x}$
D	$f'(1)$ if $f(x) = x^2 + 2x$	W	$f'(1)$ if $f(x) = 17x^2 - 5x$
E	$\lim_{x\to\frac{\pi}{2}} 7\sin x$	X	$\lim_{x\to 14} \frac{x^2 - 196}{x - 14}$
F	$\lim_{x\to 3} \frac{x^2 + 2x - 15}{x - 3}$		
G	$f'(\sqrt{3})$ if $f(x) = x^3$		
H	Vertical asymptote of $y = \frac{x + 10}{x^2 - 100}$		
I	$\lim_{x\to 13} \ln e^x$		
J	$\lim_{x\to 5} \frac{x^2 + 4x - 45}{x - 5}$		
K	$f'(1)$ if $f(x) = 5x^3$		
L	$\lim_{x\to 16} e^{\ln x}$		
M	$\lim_{x\to 2\pi} 17\sec x$		
N	$f'(2)$ if $f(x) = x^3 + x^2 + 2x$		
O	$f'(2)$ if $f(x) = x^4 + 2x^2 + x$		
P	$f'(0.5)$ if $f(x) = 33x^2 + 9x$		
Q	$f'(3)$ if $f(x) = x^3 + 4x^2 - 2x$		
R	$f'(0.5)$ if $f(x) = \frac{-3}{x^2}$		
S	$f'(20)$ if $f(x) = x^2 + 7x$		

SOLUTIONS [Don't peek until you are done!]

Numbrix-8

62	63	64	1	2	7	8	9
61	**60**	**59**	**58**	**3**	**6**	**11**	10
48	**49**	**50**	**57**	**4**	**5**	**12**	13
47	**46**	**51**	**56**	**55**	**24**	**23**	14
44	**45**	**52**	**53**	**54**	**25**	**22**	15
43	**42**	**35**	**34**	**27**	**26**	**21**	16
40	**41**	**36**	**33**	**28**	**29**	**20**	17
39	38	37	32	31	30	19	18

Limit and Derivative Numbrix Solution

1	2	3	4	7	8	9
28	27	26	5	6	11	10
29	30	25	24	23	12	13
32	31	36	37	22	21	14
33	34	35	38	39	20	15
46	45	44	43	40	19	16
47	48	49	42	41	18	17