

START

LIMITS' MAZE

Name Schade

a

$$\lim_{x \rightarrow 5^-} f(x), -2(5)$$

$$f(x) = \begin{cases} -2x, & x < 5 \\ 2x+1, & x \geq 5 \end{cases}$$

b

$$\lim_{x \rightarrow 10} \frac{x^2 - 100}{x - 10}$$

c

$$\lim_{x \rightarrow 2} x^3 + 5x^2 - 7x + 1$$

8 + 20 - 14 + 1

d

$$\lim_{x \rightarrow 1^+} f(x),$$

$$f(x) = \begin{cases} \sqrt{1-x^2}, & 0 \leq x < 1 \\ 1, & 1 \leq x < 3 \\ 3, & x = 3 \end{cases}$$

e

END

f

$$\lim_{x \rightarrow 7} \frac{x^2 - 49}{x + 49} = \frac{0}{56}$$

g

$$\lim_{x \rightarrow -2^+} f(x),$$

$$f(x) = \begin{cases} x^2 + 6, & x \neq -2 \\ 0, & x = -2 \end{cases}$$

h

$$\lim_{x \rightarrow 7^+} f(x),$$

$$f(x) = \begin{cases} -2x - 5, & x < 7 \\ 2x - 4, & x \geq 7 \end{cases}$$

i

$$\lim_{x \rightarrow 9} \frac{x^2 - 81}{x - 9}$$

j

$$\lim_{x \rightarrow 7^-} (x - \lceil x \rceil)$$

6.9 - 6

k

$$\lim_{x \rightarrow 4^-} \frac{x - 4}{|x - 4|} +$$

l

$$\lim_{x \rightarrow 3^-} \frac{\sqrt{2x}(x-3)}{|x-3|}$$

m

$$\lim_{x \rightarrow 0} \frac{\sqrt{1+x} - 1}{x}$$

$\frac{1+k-1}{x\sqrt{1+k}+1} = \frac{k}{x(\sqrt{1+k}+1)}$

n

$$\lim_{x \rightarrow 10} \frac{|10-x|}{10-x}$$

o

$$\lim_{h \rightarrow 0} \frac{(x+h)^3 - x^3}{h}$$

$(x+h)^2 + x(x+h) + x^2$

p

$$\lim_{x \rightarrow 2} \frac{x^2 + 4x - 12}{x^2 - 4}$$

q

$$\lim_{x \rightarrow 1} \frac{3x^2 + 7x - 2}{3x^2 - 4x - 2}$$

3 + 7 - 2 = 8
3 - 4 - 2 = -3

r

$$\lim_{x \rightarrow 6^+} \frac{\sqrt{x-6}}{x}$$

0/6 = 0

s

$$\lim_{x \rightarrow -6} \frac{x^2 + 12x + 36}{x + 6}$$

t

$$\lim_{x \rightarrow 1} \frac{x^2 - 1}{x^2 - 6x + 5}$$