

Review of Limits  
A Puzzle by David Pleacher

Directions: Solve each of the 17 problems on limits and find its matching answer in the column at the right. Use the word at the right of the answer to decode the message below.

MATCHING

___ 1.	$\lim_{x \rightarrow \infty} \frac{6 - 7x}{x + 3} =$	None of the answers below:	WHERE
___ 2.	$\lim_{x \rightarrow 5} 4 =$	4x	AND
___ 3.	$\lim_{x \rightarrow 1} \frac{x^2 - 1}{x - 1} =$	$\frac{3}{a}$	BE
___ 4.	$\lim_{x \rightarrow 0} \frac{x^2 + 3x}{x} =$	-11	WATCH
___ 5.	$\lim_{x \rightarrow 3} \frac{x^3 + 27}{x + 3} =$	-9	THREE
___ 6.	$\lim_{x \rightarrow a} \frac{3}{x} =$	-7	GROUPS
___ 7.	$\lim_{x \rightarrow 0} \frac{4}{x^2} =$	-6	PEOPLE
___ 8.	$\lim_{x \rightarrow 0} \frac{4}{x^2} =$	-1	WATCHES
___ 9.	$\lim_{x \rightarrow \infty} \left(-6 - \frac{3}{x^2}\right) =$	0	HAPPENED
___ 10.	$\lim_{x \rightarrow 0} \frac{8x - 8}{x - 1} =$	2	MAKE
___ 11.	$\lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h} =$ If $f(x) = 2x^2$	3	THINGS

___ 12.	$\lim_{x \rightarrow \infty} \frac{7x - 7}{x - 1} =$	4	THOSE
___ 13.	$\lim_{x \rightarrow -3} \frac{x^3 + 27}{x + 3} =$	5	WHAT
___ 14.	$\lim_{x \rightarrow 1} \frac{5x - 5}{x - 1} =$	6	CAN
___ 15.	$\lim_{x \rightarrow 1} \frac{5x^2 + x}{x} =$	7	DIVIDED
___ 16.	$\lim_{x \rightarrow -1} (-2x^2 + 5x - 2) =$	8	HAPPEN
___ 17.	$\lim_{x \rightarrow -4} \frac{3x^2 + 13x + 4}{x + 4} =$	9	WONDER
		27	INTO
		35	WHY
		$\infty$	WHO

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NOW, Decode the secret message by placing the corresponding word for each problem number in the blank spaces below:

                                                     :  
 9        15        6        12        13        16        1  
  
                                      
 2        8        3        4        10  
  
                                      
 2        8        17        4        10  
  
                                              
 11        2        8        5        14        7