Limits BINGO KEY

$-\frac{1}{9}$	12	3	5	1
7	$\frac{9}{2}$	0	2	~~DNE~~ (∞)
DNE not defined from left	$-\frac{3}{2}$	~~DNE~~ $(-\infty)$	–2	4
DNE	6	–4	$-\frac{1}{4}$	10
$\frac{11}{2}$	–3	–1	–5	DNE left lim ≠ right lim

Find each limit. Then locate your answer on the BINGO board and circle it (also write problem number in the square). Work problems in any order until you have circled 5 answers in a row – horizontally, vertically, or diagonally. Then shout **BINGO**!

1. $\lim_{x\to 3}\frac{x^2-9}{x-3}$ 6
2. $\lim_{x\to 3}\frac{x^2-x-6}{x-3}$ 5
3. $\lim_{x\to 4}\frac{x-4}{\sqrt{x}-2}$ 4
4. $\lim_{x\to 3} 7$ 7
5. $\lim_{x\to \frac{1}{2}}\frac{6x^2+5x-4}{2x-1}$ $\frac{11}{2}$
6. $\lim_{x\to -1}\left(\sqrt[3]{x}-\frac{2}{\sqrt[3]{x}}\right)^5$ 1
7. $\lim_{x\to 2}\frac{x-2}{\frac{1}{x}-\frac{1}{2}}$ –4
8. $\lim_{x\to 2}\frac{x^3-8}{x-2}$ 12
9. $\lim_{x\to -\frac{1}{2}}\frac{5x+2}{2x}$ $\frac{9}{2}$
10. $\lim_{h\to 0}\frac{2-\sqrt{4+h}}{h}$ $-\frac{1}{4}$
11. $\lim_{h\to 0}\frac{(5+h)^2-25}{h}$ 10
12. $\lim_{x\to 4^-}\frac{|x-4|}{x-4}$ –1
13. $\lim_{x\to 4}\frac{|x-4|}{x-4}$ DNE R≠L
14. $\lim_{x\to 4^+}\sqrt{x-4}-5$ –5
15. $\lim_{x\to 4^-}\sqrt{x-4}$ DNE L not defined
16. $\lim_{x\to\infty}\frac{15x^2-2x+3}{5x^2-7}$ 3
17. $\lim_{x\to\infty}\frac{\sqrt{4x^2+5}}{x-3}$ 2
18. $\lim_{x\to -\infty}\frac{\sqrt{4x^2+5}}{x-3}$ –2
19. $\lim_{x\to 4^+}\frac{1}{x-4}$ ∞
20. $\lim_{x\to 4^-}\frac{1}{x-4}$ $-\infty$
21. $\lim_{h\to 0}\frac{(3+h)^{-1}-3^{-1}}{h}$ $-\frac{1}{9}$
22. $\lim_{x\to -\infty}\frac{4-3x^3}{2x^3+3x-1}$ $-\frac{3}{2}$
23. $\lim_{x\to\infty}\frac{10-3x}{(2x+1)^3}$ 0
24. $\lim_{x\to\infty}\tan x$ DNE