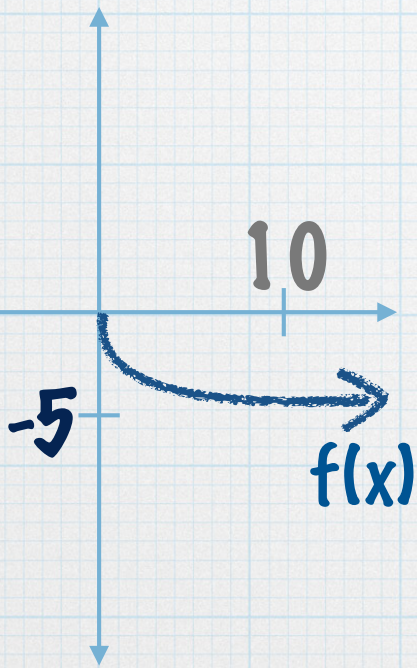


# Quick review

Limits and infinity

When finding limits you're paying attention to where the y coordinate is going at a given x value

$$\lim_{x \rightarrow 10} f(x) = -5$$



Using algebra to find  
a limit is "hard"!  
^  
NOT

If you use Prof. K's #ProTips!

#ProTip 1: Know your  
"job security" terms

$\lim f(x)$

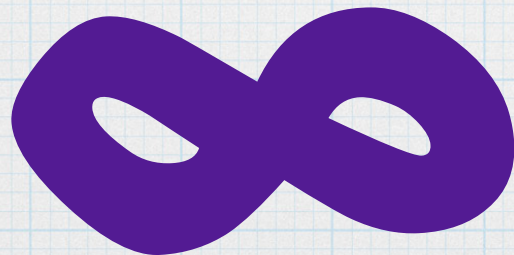
$x \rightarrow \#$

" $\lim f(x)$ " means the value of  $y$

" $x \rightarrow \#$ " means if  $x$  is almost some number  $\#$

#ProTip 1: Know your  
"job security" terms  
Remember INFINITY is a  
really BIG number  
(THINK ZILLIONS)

100,000,000,0  
00,000,000,00  
0.000.000.00...



#ProTip 1: Know your  
“job security” terms  
If you divide a number by infinity  
you get a really small number  
(THINK NANOBYTES)



$$\frac{1}{\infty} \rightarrow 0$$

#ProTip 2: Just plug in the value of  $x$  to find the "limit"

$$\lim_{x \rightarrow 5} 2x + 70 = 80$$

$$2(5) + 70 =$$

$$10 + 70 = 80$$

#ProTip 2: Just plug in the value of  $x$  to find the "limit"

$$\lim_{x \rightarrow -\infty} 2x + 70 = -\infty$$

$$2(-\infty) + 70 \\ -\infty + 70 = -\infty$$



# #ProTip 3: Watch out for Zeros in fractions!!!

$$\lim_{x \rightarrow 5} \frac{x^2 - 25}{x - 5} = \frac{0}{0} \neq 0$$

If you get a zero in a fraction  
its a red flag that you need to  
factor the function more.

...OR JUST GRAPH IT!!!



YOU CAN  
DO THIS!!!