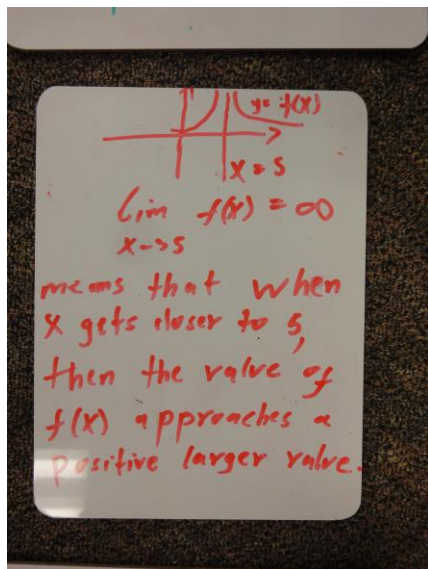


Describing an infinite limit in words....

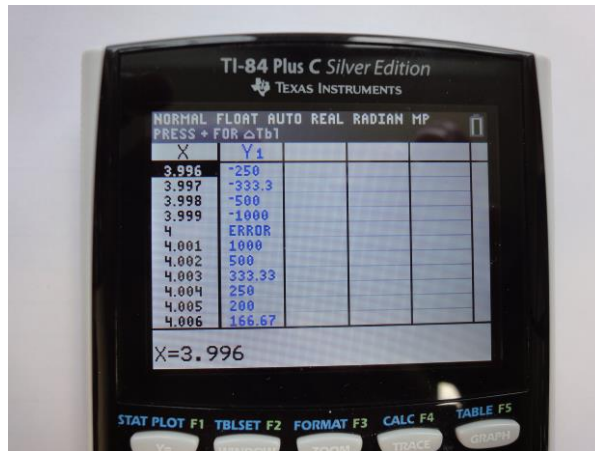
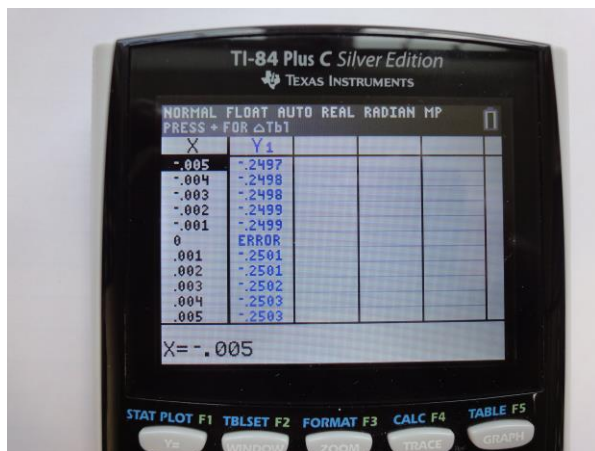
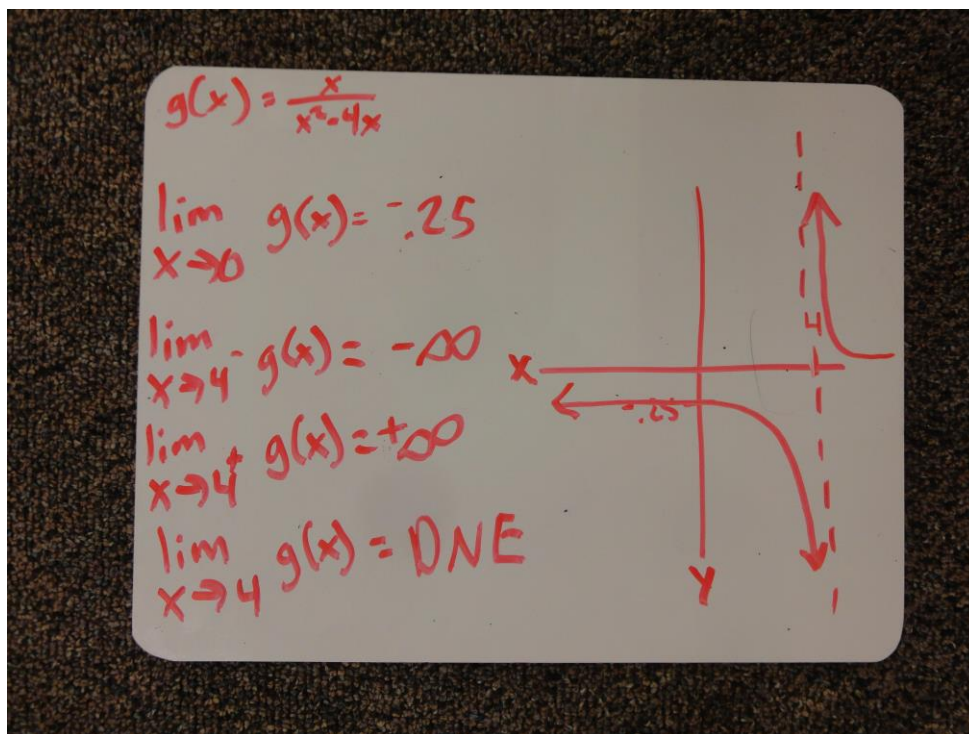


As  $x$  approaches 5,  $f(x)$  becomes infinitely larger and has no limit.

Graphical Problem (remember, we could also answer these questions with a “does not exist” but that does not provide as much information as answers like  $\pm\infty$ ).

$\lim_{x \rightarrow -2^-} h(x) = -\infty$        $\lim_{x \rightarrow 3^-} h(x) = \infty$   
 $\lim_{x \rightarrow -2^+} h(x) = -\infty$        $\lim_{x \rightarrow 3^+} h(x) = -\infty$   
 $\lim_{x \rightarrow -2} h(x) = -\infty$        $\lim_{x \rightarrow 3} h(x) = \text{DNE}$

Important problem of the day:



Note!!! The graph above should have a hole or gap at the point  $(0, -0.25)$ . We see that  $\lim_{x \rightarrow 0} g(x) = -0.25$  but  $g(0)$  is not defined [this can be seen by looking at the table at  $x = 0$  or by trying to calculate  $g(0)$  directly].