## WORKSHOP 1.5

 ${\bf Problem}$ 

Question: Let

$$f(x) = \begin{cases} 2 & \text{if } x \text{ is rational} \\ 1 & \text{if } x \text{ is not rational} \end{cases}.$$

Explain why  $\lim_{x\to 0} f(x) \neq 1$ .