1. a) $\lim_{(x,y)\to(1,0)} x+y=1$
   $\|(x-1,y)\| < \delta \Rightarrow |x+y-1| < \epsilon$
   - $|x-1| \leq \|(x-1,y)\| < \delta$
   - $|y| \leq \|(x-1,y)\| < \delta$

   $|x+y-1| \leq |x-1| + |y| < 2\cdot\delta \Rightarrow$
   $\delta = \frac{\epsilon}{2}$

   b) $\lim_{(x,y)\to(-1,8)} xy=-8$
   $\|(x+1,y-8)\| < \delta \Rightarrow |xy+8| < \epsilon$
   - $|x+1| \leq \|(x+1,y-8)\| < \delta$
   - $|y-8| \leq \|(x+1,y-8)\| < \delta$

   $|xy+8| = |((x+1)-1)((y-8)+8)+8| =$
   $|(x+1)(y-8)+(x+1)(8)+(-(y-8))-8+8| =$
   $|(x+1)(y-8)+(x+1)(8)+(-(y-8))| \overset{Desigualdad Triangular}{\leq}$
   $|(x+1)(y-8)| + 8|x+1| + |y-8| <$
   $\delta\cdot\delta + 8\delta + \delta = \delta^2 + 9\delta \overset{\delta\leq 1}{\leqq}$
   $10\delta \Rightarrow \delta = \frac{\epsilon}{10}$

2. a) $\epsilon = 1 \Rightarrow \delta = \frac{1}{10}$
   b) $\epsilon = \frac{1}{100} \Rightarrow \delta = \frac{1}{1000}$