$\lim_{(x,y)\to(2,3)} y\sin(x\cdot y - 6) = 0$

$\|(x-2, y-3)\| < \delta \Rightarrow |y\cdot\sin(x\cdot y - 6)| < \epsilon$

- $|x-2| \leq \|(x-2, y-3)\| < \delta$

- $|y-3| \leq \|(x-2, y-3)\| < \delta$

$|y\cdot\sin(x\cdot y - 6)| \equiv$
$|((y-3)+3)\cdot\sin(((x-2)+2)\cdot((y-3)+3)-6)| \equiv$
$|((y-3)+3)\cdot\sin((x-2)(y-3)+3(x-2)+2(y-3)+6-6)| \equiv$
$|((y-3)+3)\cdot\sin((x-2)(y-3)+3(x-2)+2(y-3))| \equiv$
$|(y-3)+3| \cdot |\sin((x-2)(y-3)+3(x-2)+2(y-3))|$
$(x,y)\to(2,3) \Rightarrow (x-2)(y-3)+3(x-2)+2(y-3)\to 0$
$\star: x\to 0 \Rightarrow \text{sen}(x) \leq x$
$|(y-3)+3| \cdot |\sin((x-2)(y-3)+3(x-2)+2(y-3))| \overset{\star}{\leq}$
$|(y-3)+3| \cdot |(x-2)(y-3)+3(x-2)+2(y-3)| \overset{DesTrian}{\leq}$
$(|y-3|+3)\cdot(|x-2|\,|y-3|+3|x-2|+2|y-3|) =$
$(|y-3|+3)\cdot(|x-2|\,|y-3|+3|x-2|+2|y-3|) <$
$(\delta+3)\cdot(\delta^2+5\delta) \overset{\delta\leq 1}{\leq}$
$(\delta+3)\cdot(6\delta) =$
$6\delta^2+18\delta \overset{\delta\leq 1}{\leq}$
$24\delta = \epsilon \Rightarrow \delta = \text{mín}(1, \frac{\epsilon}{24})$