PRACTICE QUIZ 1

1. A machinist is required to construct a square metal plate with area $100\ cm^2$.

(a) What length for the sides produces such a square?

(b) If the machinist is allowed an error tolerance of $\pm 1\ cm^2$ in the area of the disk, how close to the ideal side in part (a) must the machinist control the length of the sides?

(c) In terms of the ϵ, δ definition of the $\lim_{x \to a} f(x) = L$, what is x? What is $f(x)$? What is a? What is L? What value of ϵ is given? What is the corresponding value of δ?

(d) If the machinist is required to control the error to within an ϵ of the desired area, how close to the ideal side should the machinist construct the sides of the square?