I. Find the indicated limits. If a limit does not exist indicate so by writing DNE for your answer. You must show some work to justify your answer. Clearly indicate your answers. (4 each)

(a)
$$\lim_{x \to 2^+} \sqrt{4 - x^2}$$

(b)
$$\lim_{t \to 0} \frac{\tan^2 t}{t}$$

(c)
$$\lim_{w \to p^+} \frac{w}{\sin w}$$

(d)
$$\lim_{x \to 2^{-}} \frac{x-2}{x^2-4x+4}$$

(e)
$$\lim_{x \to 1} f(x)$$
 where $f(x) = \begin{cases} x^2 + 2, & x \ge 1 \\ x - 2, & x < 1 \end{cases}$