(a):   Evaluate the following, with an explanation. That is, show and give a brief explanation of the main steps:

$$\lim_{x \to 2} \frac{x^2 - 3x + 2}{x^2 - 4}$$

(b):   State whether the following is "TRUE" or "FALSE", with a careful explanation:

$$\lim_{x \to \pi/2^-} \frac{x^2}{\cos x} = \infty$$