1. Use L'Hôpital's Rule to evaluate the limit, or state that L'Hôpital's Rule does not apply and explain why it does not. (2 points each)

   (a)
   $$\lim_{x \to 0} \frac{\sin(\sin(\sin(x)))}{x^2 - 1}$$

   (b)
   $$\lim_{x \to -1} \frac{9x^7 + 2x^2 + 7}{x^2 - 1}$$

2. A box with no top is to be constructed from a single rectangular piece of cardboard, with side lengths A and B. The box will be constructed by cutting out squares of length x from each corner and folding up the sides.

   (a) Draw a picture to describe the situation. Label all pertinent information. (1 point)

   (b) Find the value of x that maximizes the volume of the box if $A = 15$ and $B = 24$. (4 points)

   (c) What are the dimensions of the box that maximizes volume? (1 point)