APP-1 Quadratic Models (complete all parts for M, complete 3 parts for P)
An open box is to be constructed from a piece of cardboard 20cm by 40cm, by cutting squares of side length x from each corner and folding up the sides. Find the dimensions of the box with the largest volume.

a) Define the variable x.

b) Set up your quadratic model in terms of the variable x.

c) Define the practical domain for the function found in part b.

d) Algebraically solve the model.