

MATH 101-20 (111)
QUIZ # 7 (take-home)

NAME: ID. #:

Q1. A rectangle is to be inscribed in a semicircle of radius 2. What is the largest area the rectangle can have, and what are its dimensions?

Q2. A piece of cardboard measures 30 cm by 45 cm. Two equal squares are removed from the corners of a 30-cm side. Two equal rectangles are removed from the other corners so that the tabs can be folded to form a rectangular box with lid as shown in the figure. Find the maximum volume and the value of x that gives it.