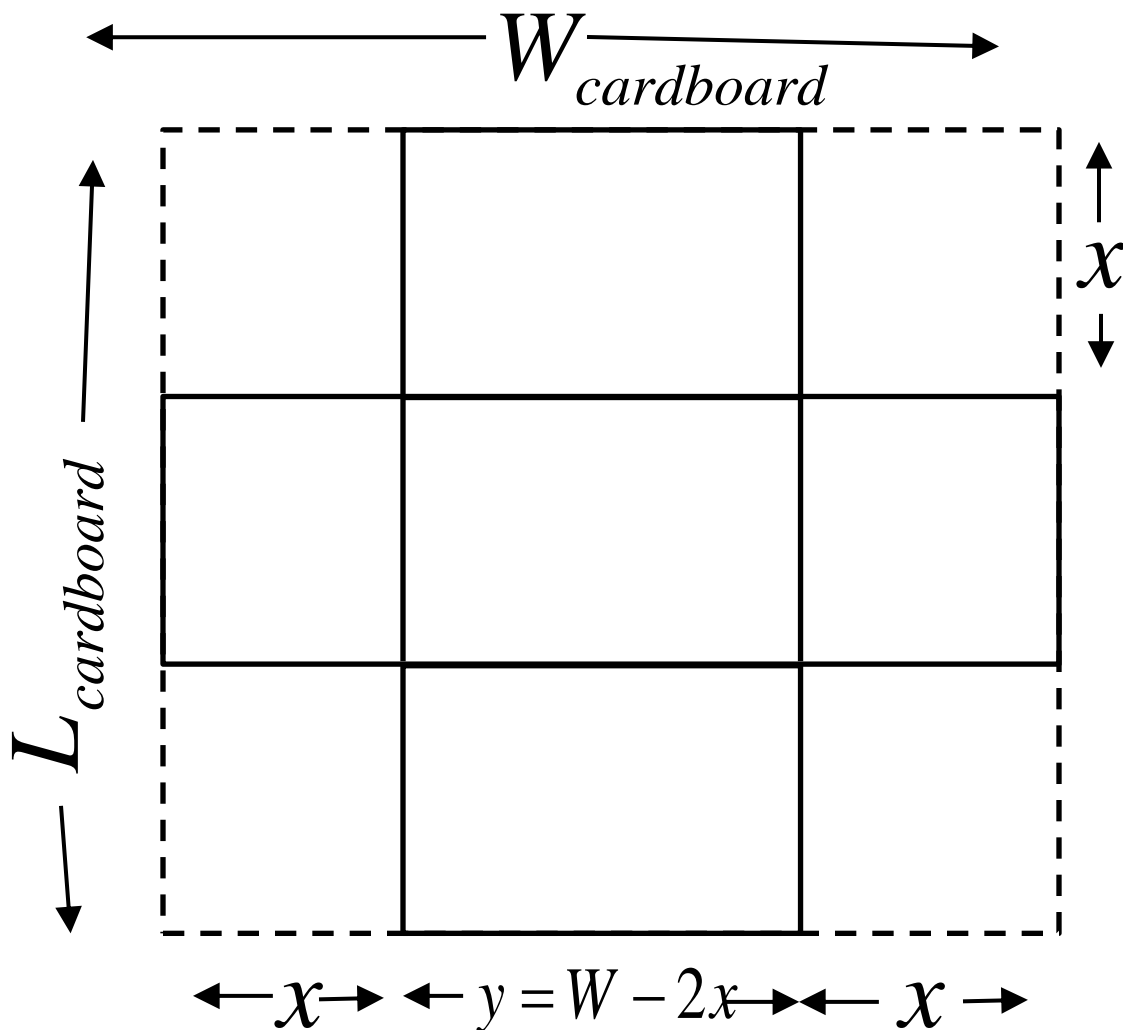


Name _____

Math-3A
HW #13-14
Areas

Date _____

1. An open-topped box is made from a flat piece of cardboard. Each side of the rectangular piece of cardboard is folded up to make the sides of the box. Using a 20 x 24 inch piece of cardboard, decide how tall your box will be then fold the sides of the paper up. Tape the sides that meet at each corner together to construct the box.
2. Write an equation that predicts the volume of the box using the height you used for your box.
3. What is the volume of your box.
4. What is the maximum possible volume of a box using this piece of paper?



5. A farmer has 500 feet of fence. He wants to construct a rectangular corral for his horses. He wants the area of the enclosed space to be 2000 square feet. What is the length and width of the enclosure?

6. A farmer has 500 feet of fence. He wants to construct a rectangular corral for his horses. Fortunately, he can use a river at the boundary of his property to be one boundary for his corral. He wants his corral to have a total area of 3000 square feet. What is the length and width of the corral?

7. What would be the length and width of the corral for problem #6 to have the maximum possible enclosed area? What is the maximum area?

8. The length of a rectangle is "3 more than twice a number." The width of the rectangle is "5 less than twice the same number." If the area of the rectangle is 400 square inches, What is the length and the width of the rectangle?