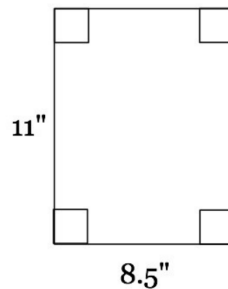# Paper Boxes

Take a regular 8.5 by 11 inch sheet of paper and cut a 1 inch square out of each corner. Fold up the sides and you have a paper box!

1. What is the volume of this paper box?

2. Cut a 2 inch square out of each corner of a new sheet of paper. What is the volume of this paper box?

11"

8.5"

3. Repeat with 3 inch and 4 inch squares.

4. Of the previous four boxes, which has the greatest volume?

5. What is the largest possible volume you could get when you make paper boxes from normal sheets of paper in this way? Defend your answer.