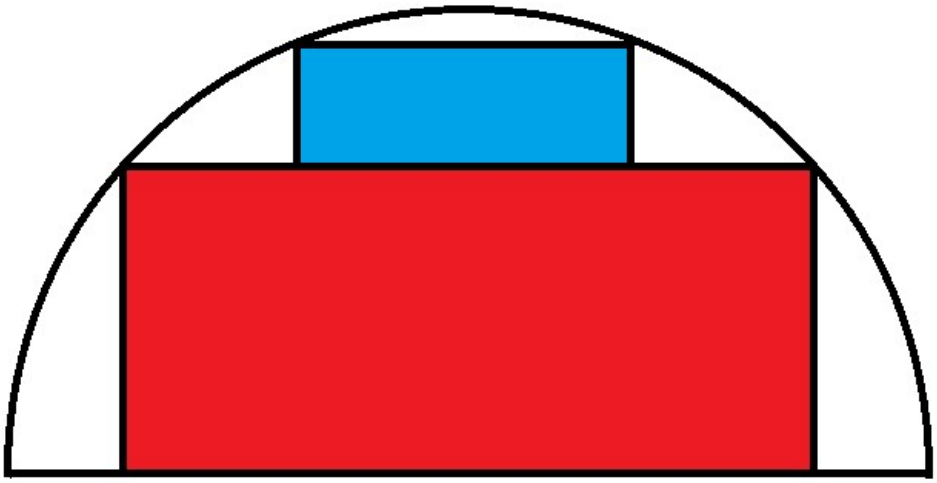
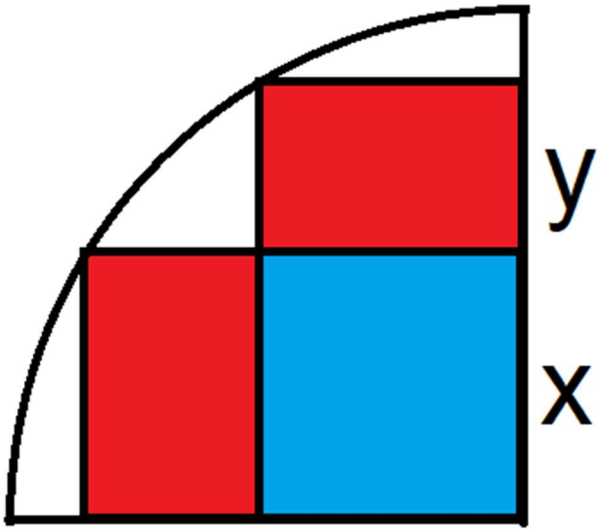
Q: What is the maximum combined area of the two inscribed rectangles in a unit semicircle?



Let's reword the problem to find inscribed rectangles in a quarter circle and then double the answer. Consider the image below, where the sides of the quarter circle on the bottom and right.