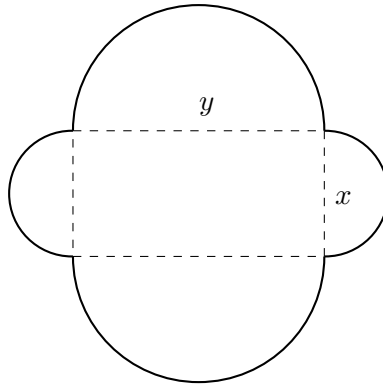


7. The figure below is made of a rectangle and semi-circles.



- (a) (3 points) Find a formula for the enclosed area of the figure.
- (b) (2 points) Find a formula for the perimeter of the figure.
- (c) (8 points) Find the values of x and y which will maximize the area if the perimeter is 100 meters.
- (d) (3 points) If the cost, in dollars, of the materials to build the enclosure is given by $C(x)$ where x is in meters, and the Marginal Cost at $x = 100$ is 25, what does this mean in the context of the problem?