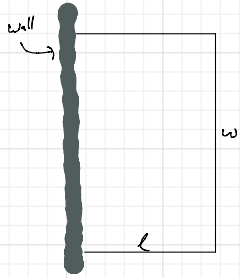


Agenda for Math 005.003 (6 May 2020, 11–11:50 am):

1. Discuss the exam.
2. Q&A

4. You have 400 feet of fencing. You will fence in a rectangular region of your backyard with this fencing but can use an already existing stone wall as one side of the rectangular region. What should the side lengths of the rectangle be so that the area is maximal?



maximize area:

$$A = \text{area} = \text{length} \times \text{width} = lw \text{ ft}^2$$

$$400 \text{ ft} = 2l + w \text{ ft}$$

$$\Rightarrow w = (400 - 2l) \text{ ft}$$

$$\rightarrow A = lw = l(400 - 2l)$$

$$= -2l^2 + 400l$$