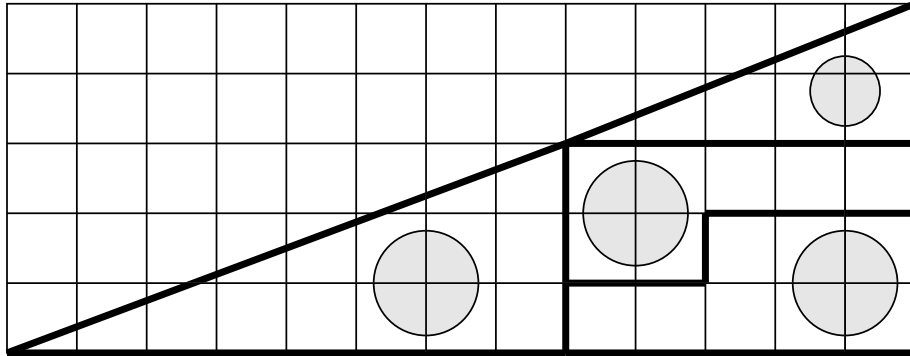


# Proof for Week 2

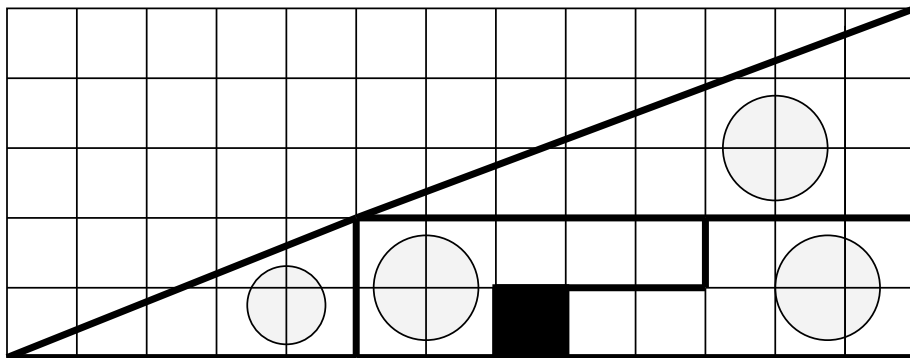
Due on Thursday, September 20<sup>th</sup>

Here is a classic problem, called the Missing Square Puzzle. Where does this missing square come from? Explain.

Take a 5 by 13 rectangle, and cut it into four pieces, as shown.



Now rearrange the four pieces, as illustrated in this diagram.



Notice that we now get a 1 by 1 hole!

Since this hole has area 1 unit, we conclude that  $0 = 1$ . It's a simply magnificent result!