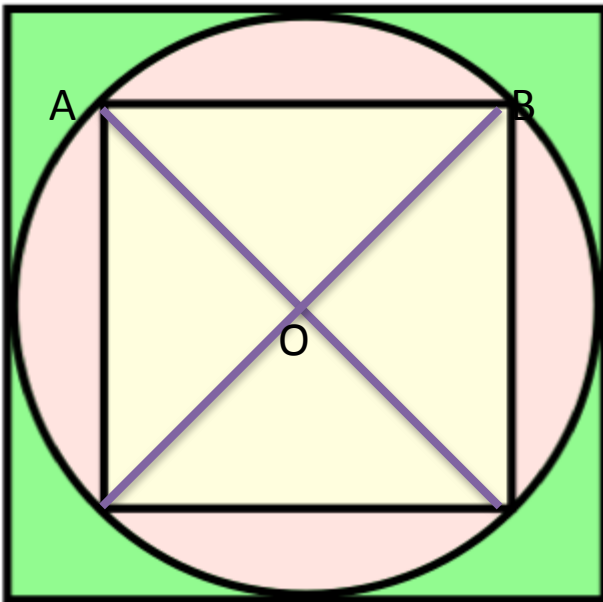


January 23rd



Area of small square = y

Hence $AB = \sqrt{y}$

Using Pythagoras in triangle OAB, and the fact that $OA=OB = r$

$$r^2 + r^2 = y$$

Therefore $r^2 = y/2$ and hence $r = \sqrt{y/2}$,

Giving the diameter of the circle = $2\sqrt{y/2}$

The diameter of the circle = length of the side of the larger square

So area of larger square = $\text{diameter}^2 = (2\sqrt{y/2})^2$

Hence area of larger square = **$2y$**

