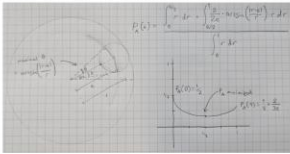


Proposed drawing:



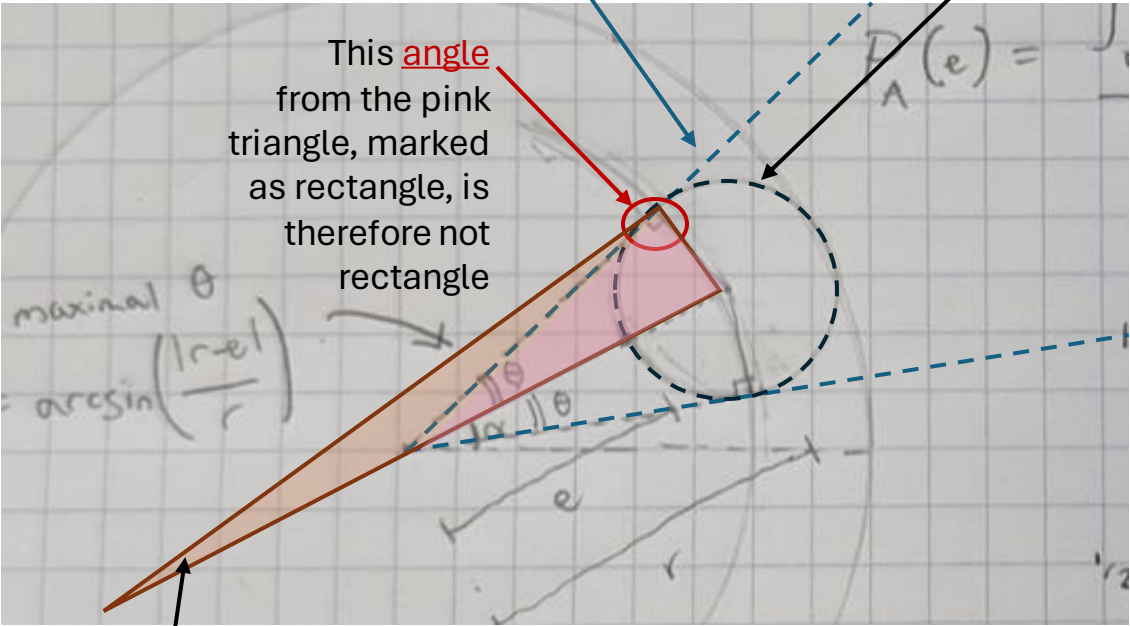
Aaron has learned that Erin always plays a fixed distance — call it e — along the correct angle. Erin knows that Aaron knows this, and that Aaron will pick a distance r (and an angle at random, presumably) to maximize $P(\text{Aaron wins})$. So Erin should pick a value for e that minimizes this probability.

So we need to determine $P(\text{Aaron wins})$ center, thus guaranteeing a win. Other located within a distance of $|r-e|$ of the l .

Maximizing the fraction of the circle of r determined by the circle's intersection p and 2 multiplier outside is to adjust for p of radius $\approx \delta$, it has a 2δ probability of be

Numerically solving for the e that minimi integral above gives $P(\text{Aaron wins}) \approx 0.1$

Congrats to this month's solvers!



This blue ray is not tangent to the black circle

This angle from the pink triangle, marked as rectangle, is therefore not rectangle

Angle = $\arcsin\left(\frac{|r - e|}{2r}\right)$

$\theta = 2 * \arcsin\left(\frac{|r - e|}{2r}\right)$

Accurate drawing below:

We can prove that $\alpha = 2 \beta$

