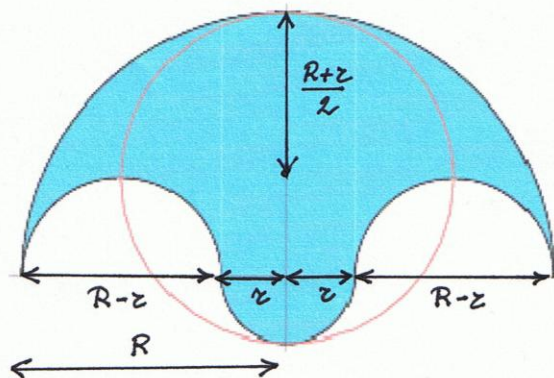
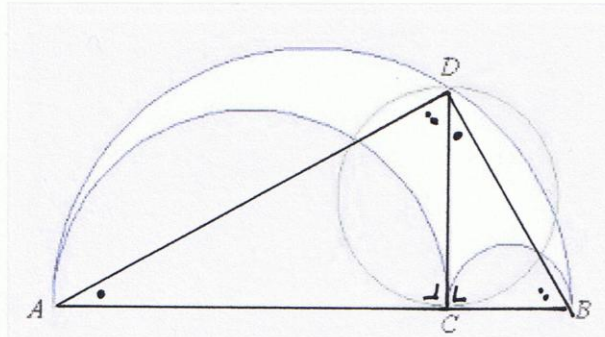


SALINON



$$\begin{aligned}
 \text{Opp. salinon} &= \frac{\pi R^2}{2} - 2 \cdot \frac{1}{2} \pi \left(\frac{R-r}{2}\right)^2 + \frac{\pi r^2}{2} \\
 &= \frac{\pi R^2}{2} - \frac{\pi R^2}{4} + \frac{\pi r R}{2} - \frac{\pi r^2}{4} + \frac{\pi r^2}{2} \\
 &= \frac{\pi R^2}{4} + \frac{\pi r R}{2} + \frac{\pi r^2}{4} \\
 &= \pi \left(\frac{R+r}{2}\right)^2.
 \end{aligned}$$

ARBELOS



stel $|CD| = x$,
 $|AB| = 2R$,
 $|AC| = 2r$,
 dan is $|CB| = 2(R-r)$.

$$\Delta ACD \sim \Delta DCB \Rightarrow \frac{|AC|}{|DC|} = \frac{|DC|}{|BC|} \Leftrightarrow \frac{2r}{x} = \frac{x}{2(R-r)} \Rightarrow x^2 = 4r(R-r)$$

en bijgevolg is opp. cirkel met middellijn $[DC] = \frac{\pi x^2}{4} = \pi r(R-r)$.

$$\begin{aligned}
 \text{Opp. arbelos} &= \frac{1}{2} \pi R^2 - \frac{1}{2} \pi r^2 - \frac{1}{2} \pi (R-r)^2 \\
 &= \frac{1}{2} \pi R^2 - \frac{1}{2} \pi r^2 - \frac{1}{2} \pi R^2 + \pi r R - \frac{1}{2} \pi r^2 \\
 &= \pi r R - \pi r^2 \\
 &= \pi r (R-r)
 \end{aligned}$$

$$\begin{aligned}
 \text{omtrek arbelos} &= \pi R + \pi r + \pi (R-r) \\
 &= 2\pi R.
 \end{aligned}$$