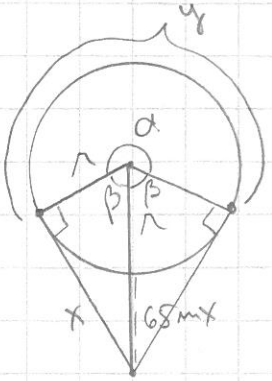
12. Ympyrän tangentti

12.6



$$r = \frac{220m}{2} = 110m$$

Pythagoras: $r^2 + x^2 = (r+65)^2$

$$\Leftrightarrow x = \pm\sqrt{175^2 - 110^2} \approx 136,107\,(m)$$

$$\cos\beta = \frac{r}{r+65} = \frac{110}{175} \Rightarrow \beta \approx 51,055°$$

$$y = \frac{\alpha}{360°} \cdot 2\pi r = \frac{360° - 2 \cdot 51,055°}{360°} \cdot 2\pi \cdot 110m \approx 495,113m$$

$\Rightarrow$ reitin pituus: $2x + y \approx 767,326\,m \approx \underline{770m}$