S. 76, Nr. 13

$\beta = \frac{180° - \alpha}{2} = \frac{180° - 60°}{2} = \underline{\underline{60°}}$ (→ Dreieck mittig ist gleichseitig)

$l_S = 2 \cdot 2\pi r \frac{180° - \beta}{360} + 2\pi r \frac{\alpha}{360} + 2r$

$= 2 \cdot 2\pi \cdot 2{,}4 \cdot \frac{180 - 60}{360} + 2\pi \cdot 2{,}4 \cdot \frac{60}{360} + 2 \cdot 2{,}4$

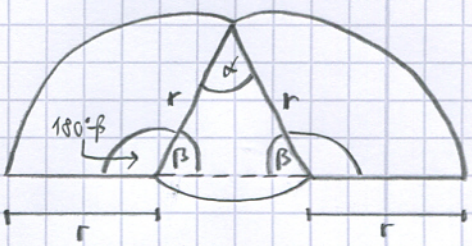
$= 4\pi \cdot 2{,}4 \cdot \frac{1}{3} + 2\pi \cdot 2{,}4 \cdot \frac{1}{6} + 4{,}8$

$= \frac{4}{3} \cdot 2{,}4\pi + \frac{\cancel{2}^{1}}{\cancel{6}_{3}} \cdot 2{,}4\pi + 4{,}8$

$= \frac{5}{3} \cdot 2{,}4\pi + 4{,}8$

$= 4\pi + 4{,}8$ cm

$\approx \underline{\underline{17{,}37 \text{ cm}}}$



$A = 2 \cdot \pi r^2 \cdot \frac{180° - \beta}{360} + \pi r^2 \cdot \frac{\alpha}{360}$

$= 2 \cdot \pi r^2 \cdot \frac{180 - 60}{360} + \pi r^2 \cdot \frac{60}{360}$

$= 2 \cdot \pi r^2 \cdot \frac{1}{3} + \pi r^2 \cdot \frac{1}{6}$

$= \frac{\cancel{2}^{4}}{\cancel{6}_{3}} \pi \cdot 2{,}4^2 + \frac{1}{6} \cdot \pi \cdot 2{,}4^2$

$= \frac{5}{6} \pi \cdot 2{,}4^2$

$= 4{,}8\pi \text{ cm}^2$

$\approx \underline{\underline{15{,}08 \text{ cm}^2}}$