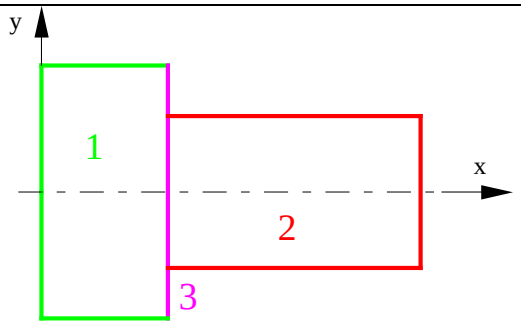

Aufgabe 1:

Zylinderoberflächen:

$O_1 = \pi \cdot 10 \cdot 5 cm^2 = 157{,}08 cm^2$

$O_2 = \pi \cdot 6 \cdot 10 cm^2 = 188{,}5 cm^2$

Kreisringfläche:

$O_3 = \pi\left(r_a^2 - r_i^2\right) = \pi\left(5^2 - 3^2\right) cm^2 = 50{,}27 cm^2$

i	O_i [cm²]	x_i [cm]	$x_i O_i$ [cm³]
1	157,08	2,5	392,7
2	188,5	10	1884,96
3	50,27	5	251,33
	$\sum O_i =$ 395,84		$\sum x_i O_i =$ 2528,98

$$x_S = a = \frac{1}{\sum O_i} \sum x_i O_i = 63{,}89\,\text{mm}$$