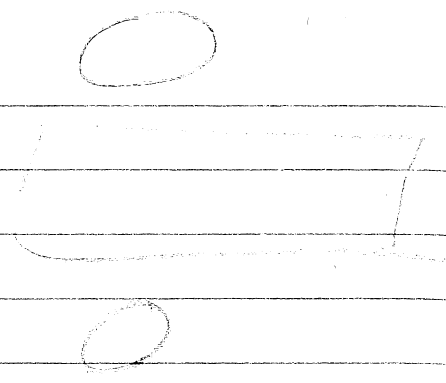


Konstfärg
Lila
8250



materialutgången =



$$\text{den SA} = 2\pi r^2 + \pi D \cdot h$$

$$\begin{aligned} \text{Volym} &= \pi r^2 \cdot h \\ 1000 &= \pi r^2 \cdot h \\ 1000 &= h \cdot \pi r^2 \\ \frac{1000}{\pi r^2} &= h \end{aligned}$$

$$\text{SA} = 2\pi r^2 + \frac{2\pi r \cdot 1000}{\pi r^2}$$

$$\frac{2000\pi \cdot 1000}{\pi r^2}$$

$$\frac{2000}{r}$$

$$\text{SA} = 2\pi r^2 + \frac{2000}{r}$$

$$= 2\pi r^2 + 2000r^{-1}$$

$$\text{SA}' = 4\pi r - 2000r^{-2}$$

$$= 4\pi r - \frac{2000}{r^2}$$

för max och min

$$\text{SA}' = 0$$

$$\frac{2000}{r^2} = 4\pi r$$

$$2000 = 4\pi r^3$$

$$500 = \pi r^3$$

$$\frac{500}{\pi} = r^3$$

$$\sqrt[3]{\frac{500}{\pi}} = r$$

$$r \approx 5,414$$

$$d \approx 10,828$$

$$\approx 10,8$$

$$h = \frac{1000}{\pi r^2}$$

$$\approx 10,828$$

$$\approx 10,8$$

Höjd \approx diameter $\approx 10,8$ cm

[Kolla lösning i boken s 259 ser ut att vara: annorlunda]