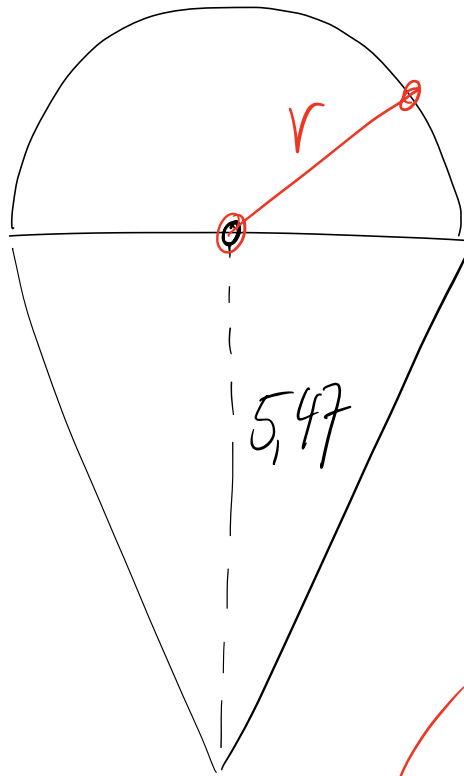


$$2) r = \frac{1}{4} \cdot 5,47$$

$$r = 1,3675$$



$\frac{1}{2}$  boule

$$V = \frac{4}{3} \pi \cdot (1,3675)^3 \cdot \frac{1}{2} + \frac{1}{3} \pi \cdot (1,3675)^2 \cdot 5,47$$

$$\approx 1,70487 \cdot \pi + 3,40974 \pi$$

$$\approx 5,11461 \cdot \pi \approx 16,068 \approx 16,1 \text{ cm}^3$$

$$b) V = \frac{500 \text{ g}}{6,975 \text{ g/cm}^3} \approx 71,685 \text{ cm}^3$$

$$V = \frac{4}{3} \pi r^3 \cdot \frac{1}{2} + \frac{1}{3} \pi r^2 \cdot 4r$$

$$V = \frac{2}{3}\pi r^3 + \frac{4}{3}\pi r^3 = 2\pi r^3$$

Ainsi,  $2\pi r^3 \approx 71,685$

$$r^3 \approx \frac{71,685}{2\pi}$$

$$r \approx \sqrt[3]{\frac{71,685}{2\pi}} \approx \sqrt[3]{11,40902}$$

$$\approx 2,251$$

Le hauteur du cône vaut environ

$$4 \cdot 2,251 \approx 9,0 \text{ cm}$$