

1)

$$O = 4 \cdot r^2 \cdot \pi$$

$$O = 4 \cdot 6^2 \cdot \pi$$

$$O = 452,4 \text{ cm}^2$$

$$O \approx \mathbf{4,5 \text{ dm}^2}$$

2)

$$O = 4 \cdot r^2 \cdot \pi$$

$$O = 2 \cdot 2,4^2 \cdot \pi$$

$$O \approx \mathbf{72,4 \text{ m}^2}$$

3)

$$r = \frac{d}{2}$$

$$r = \frac{8}{2}$$

$$r = 4 \text{ mm}$$

$$O = 4 \cdot r^2 \cdot \pi$$

$$O = 4 \cdot 4^2 \cdot \pi$$

$$O = 201,1 \text{ mm}^2$$

$$O \approx \mathbf{2 \text{ cm}^2}$$

4)

$$r = \frac{d}{2}$$

$$r = \frac{13}{2}$$

$$r = 6,5 \text{ dm}$$

$$O = 4 \cdot r^2 \cdot \pi$$

$$O = 4 \cdot 6,5^2 \cdot \pi$$

$$O = 530,9 \text{ dm}^2$$

$$O \approx \mathbf{5,3 \text{ m}^2}$$

5)

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

$$V = \frac{4 \cdot 17^3 \cdot \pi}{3}$$

$$V = 20\,579,5 \text{ cm}^3$$

$$V \approx \mathbf{20,6 \text{ dm}^3}$$

6)

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

$$V = \frac{4 \cdot 0,5^3 \cdot \pi}{3}$$

$$V \approx \mathbf{0,524 \text{ m}^3}$$

7)

$$O = 4 \cdot r^2 \cdot \pi$$

$$O = 4 \cdot 28^2 \cdot \pi$$

$$O = 9852 \text{ mm}^2$$

$$O \approx \mathbf{98,5 \text{ cm}^2}$$

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

$$V = \frac{4 \cdot 28^3 \cdot \pi}{3}$$

$$V = 91\,952,3 \text{ mm}^3$$

$$V \approx \mathbf{92 \text{ cm}^3}$$

8)

$$r = \frac{d}{2}$$

$$r = \frac{29}{2}$$

$$r = 14,5 \text{ cm}$$

$$O = 4 \cdot r^2 \cdot \pi$$

$$O = 4 \cdot 14,5^2 \cdot \pi$$

$$O = 2642 \text{ cm}^2$$

$$O \approx \mathbf{26,4 \text{ dm}^2}$$

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

$$V = \frac{4 \cdot 14,5^3 \cdot \pi}{3}$$

$$V = 12\,770 \text{ cm}^3$$

$$V \approx \mathbf{12,8 \text{ dm}^3}$$

9)

$$r = \frac{d}{2}$$

$$r = \frac{2}{2}$$

$$r = 1 \text{ dm}$$

$$O = 4 \cdot r^2 \cdot \pi$$

$$O = 4 \cdot 1^2 \cdot \pi$$

$$O = 12,6 \text{ dm}^2$$

$$O_{\text{mit Verschnitt}} = \frac{O \cdot 106}{100}$$

$$O_{\text{mit Verschnitt}} = \frac{12,6 \cdot 106}{100}$$

$$O_{\text{mit Verschnitt}} = 13,356 \text{ dm}^2$$

$$O_{\text{mit Verschnitt}} \approx \mathbf{13,4 \text{ dm}^2}$$

10)

$$O = 4 \cdot r^2 \cdot \pi / : (4 \cdot \pi)$$

$$\frac{O}{4 \cdot \pi} = r^2 \quad / \sqrt{\quad}$$

$$\sqrt{\frac{O}{4 \cdot \pi}} = r$$

$$r = \sqrt{\frac{O}{4 \cdot \pi}}$$

$$r = \sqrt{\frac{765}{4 \cdot \pi}}$$

$$r = \sqrt{\frac{765}{12,57}}$$

$$r = \sqrt{60,9}$$

$$r \approx \mathbf{7,8 \text{ cm}}$$

11)

$$O = 4 \cdot r^2 \cdot \pi / : (4 \cdot \pi)$$

$$\frac{O}{4\pi} = r^2 \quad / \sqrt{\quad}$$

$$\sqrt{\frac{O}{4\pi}} = r$$

$$r = \sqrt{\frac{O}{4\pi}}$$

$$r = \sqrt{\frac{1}{4\pi}}$$

$$r = \sqrt{\frac{1}{12,57}}$$

$$r = \sqrt{0,08}$$

$$r \approx \mathbf{0,28 \text{ m}}$$

12)

$$O = 4 \cdot r^2 \cdot \pi / : (4 \cdot \pi)$$

$$\frac{O}{4\pi} = r^2 \quad / \sqrt{\quad}$$

$$\sqrt{\frac{O}{4\pi}} = r$$

$$r = \sqrt{\frac{O}{4\pi}}$$

$$r = \sqrt{\frac{9160}{4\pi}}$$

$$r = \sqrt{\frac{9160}{12,57}}$$

$$r = \sqrt{729}$$

$$r \approx 27 \text{ mm}$$

$$d = 2 \cdot r$$

$$d = 2 \cdot 27$$

$$d = \mathbf{54 \text{ mm}}$$

13)

$$O = 4 \cdot r^2 \cdot \pi / : (4 \cdot \pi)$$

$$\frac{O}{4\pi} = r^2 \quad / \sqrt{\quad}$$

$$\sqrt{\frac{O}{4\pi}} = r$$

$$r = \sqrt{\frac{O}{4\pi}}$$

$$r = \sqrt{\frac{0,785}{4\pi}}$$

$$r = \sqrt{\frac{0,785}{12,57}}$$

$$r = \sqrt{0,062}$$

$$r \approx 0,25 \text{ m}$$

$$d = 2 \cdot r$$

$$d = 2 \cdot 0,25$$

$$d = \mathbf{0,5 \text{ m}}$$

14)

$$O = 4 \cdot r^2 \cdot \pi / : (4 \cdot \pi)$$

$$\frac{O}{4\pi} = r^2 \quad / \sqrt{\quad}$$

$$\sqrt{\frac{O}{4\pi}} = r$$

$$r = \sqrt{\frac{O}{4\pi}}$$

$$r = \sqrt{\frac{260}{4\pi}}$$

$$r = \sqrt{\frac{260}{12,57}}$$

$$r = \sqrt{20,7}$$

$$r \approx 4,5 \text{ cm}$$

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

$$V = \frac{4 \cdot 4,5^3 \cdot \pi}{3}$$

$$V \approx \mathbf{381,7 \text{ m}^3}$$

15)

$$\begin{aligned}
 O &= 4 \cdot r^2 \cdot \pi \quad / : (4 \cdot \pi) & r &= \sqrt{\frac{O}{4 \cdot \pi}} \\
 \frac{O}{4 \cdot \pi} &= r^2 \quad / \sqrt{} & r &= \sqrt{\frac{14}{4 \cdot \pi}} \\
 \sqrt{\frac{O}{4 \cdot \pi}} &= r & r &= \sqrt{\frac{14}{12,57}} \\
 & & r &= \sqrt{1,11} \\
 & & r &\approx \mathbf{1,05 \text{ dm}}
 \end{aligned}$$

16)

$$\begin{aligned}
 O &= 4 \cdot r^2 \cdot \pi \quad / : (4 \cdot \pi) & r &= \sqrt{\frac{O}{4 \cdot \pi}} & V &= \frac{4 \cdot r^3 \cdot \pi}{3} \\
 \frac{O}{4 \cdot \pi} &= r^2 \quad / \sqrt{} & r &= \sqrt{\frac{154}{4 \cdot \pi}} & V &= \frac{4 \cdot 3,5^3 \cdot \pi}{3} \\
 \sqrt{\frac{O}{4 \cdot \pi}} &= r & r &= \sqrt{\frac{154}{12,57}} & V &\approx \mathbf{179,6 \text{ mm}^3} \\
 & & r &= \sqrt{12,25} \\
 & & r &= 3,5 \text{ mm}
 \end{aligned}$$

17)

$$\begin{aligned}
 V &= \frac{4 \cdot r^3 \cdot \pi}{3} \quad / \cdot 3 & r &= \sqrt[3]{\frac{3 \cdot V}{4 \cdot \pi}} \\
 3 \cdot V &= 4 \cdot r^3 \cdot \pi \quad / : (4 \cdot \pi) & r &= \sqrt[3]{\frac{3 \cdot 1437}{4 \cdot \pi}} \\
 \frac{3 \cdot V}{4 \cdot \pi} &= r^3 \quad / \sqrt[3]{} & r &= \sqrt[3]{\frac{4311}{12,57}} \\
 \sqrt[3]{\frac{3 \cdot V}{4 \cdot \pi}} &= r & r &\approx \sqrt[3]{343} \\
 & & r &= \mathbf{7 \text{ cm}}
 \end{aligned}$$