28/1

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

$r = 4\,m$

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

$V \doteq 268{,}08\,m^3 \doteq \underline{268\,m^3}$

28/2

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

A) $r = 7\,m$

$V = \frac{4}{3} \cdot \pi \cdot 7^3$

$V \doteq 1436{,}76\,m^3$

$\doteq \underline{1440\,m^3}$

B) $r = 8\,m$

$V = \frac{4}{3} \cdot \pi \cdot 8^3$

$V \doteq 2144{,}66\,m^3$

$\doteq \underline{2140\,m^3}$

29/3

$d = 36\,cm \rightarrow r = 18$

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

$V = \frac{4}{3} \cdot \pi \cdot 18^3$

$V \doteq 24\,429\,cm^3 \doteq 24\,dm^3$

$1\,l = 1\,dm^3$

$\doteq 24$ litrů

29/4

$r = 60\,mm$

$$V_0 = \frac{4}{3}\pi r^3$$

$V_0 = \frac{4}{3}\pi \cdot 60^3$

$V_0 \doteq 904\,778{,}7\,mm^3 \doteq 0{,}9\,dm^3$

$V_0 \doteq 0{,}45\,dm^3 \doteq 0{,}45\,l$

Tabulka

r(cm)	V(cm^3)	S(cm^2)
2	33,51	50,27
2,999	113	113,04
9	3053,6	1 017,88
10	4 188,8	1256
15	14130	2826,48
18	24 429	4069,44

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

$$V = \frac{4}{3}\pi r^3 \quad / : \frac{4}{3}\pi$$

$$\frac{V}{\frac{4}{3}\pi} = r^3 \quad / \sqrt[3]{\ }$$

$$\sqrt[3]{\frac{V}{\frac{4}{3}\pi}} = r = \sqrt[3]{\frac{3V}{4\pi}}$$

$$S = 4\pi r^2$$

$$S = 4\pi r^2 \quad / : 4\pi$$

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

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

73)

$d = 12\,cm$ $\quad r = 6\,cm$

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

$V = \frac{4}{3}\pi 6^3$

$V \doteq 904{,}8\,cm^3$

$S = 4\pi r^2$

$S = 4\pi 6^2$

$S \doteq 452{,}4\,cm^2$

$d = 9\,cm$ $\quad r = 4{,}5\,cm$

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

$V \doteq 381{,}7\,cm^3$

$S = 4\pi 4{,}5^2$

$S \doteq 254{,}47\,cm^2$

$d = 60\,mm = 6\,cm$ $\quad r = 3\,cm$

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

$V \doteq 113\,cm^3$

$V \doteq 113097\,mm^3$

$S = 4\pi 3^2$

$S \doteq 113\,cm^2$

$S \doteq 113097\,mm^3$

74)

$r = ?$

$S = 72\,cm^2$

$S = 4\pi r^2$

$72 = 4\pi r^2 \mid : 4\pi$

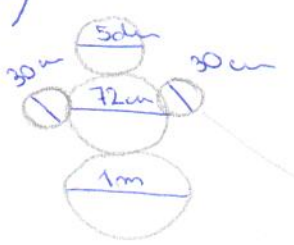
$\frac{72}{4\pi} = r^2 \mid \sqrt{\ }$

$\sqrt{\frac{72}{4\pi}} = r$

$2{,}4 \doteq r$

$r \doteq 2{,}4\,cm$

75)



$\cdot 2$

30cm $d = 30\,cm$

$r = 15\,cm$

$V = \frac{4}{3}\pi 15^3$

$V = 14\,137\,cm^3$

$\cdot 2 \quad V = 28\,274\,cm^3$

5dm $d = 5dm = 50\,cm$

$r = 25\,cm$

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

$V = \frac{4}{3}\pi 25^3$

$V \doteq 65\,450\,cm^3$

72cm $d = 72\,cm$

$r = 36\,cm$

$V = \frac{4}{3}\pi 36^3$

$V \doteq 195\,432\,cm^3$

1m $d = 1m = 100\,cm$

$r = 50\,cm$

$V = \frac{4}{3}\pi 50^3$

$V \doteq 523\,599\,cm^3$

28 274
65 450
195 432
523 599

812 755 cm^3 ≈ 812,8 dm^3