Englische Übungen zu Zylinder, Kegel und Kugel

1. A circular cylinder has the volume $V = 2500\ cm^3$. Calculate the surface of the cylinder
   a. when the radius $r = 15\ cm$ is known.
   b. when the height $h = 15\ cm$ is known.

2. A can with the volume $V = 1\ l$ has the diameter $d = 10\ cm$. Find the height of the can.

3. A cone has the radius $r = 4.5\ cm$ and the height $h = 6.0\ cm$. Find **1)** the volume **2)** the length of the slant height and **3)** the surface.

4. Calculate volume and surface of a sphere with
   a. radius $r = 12.6\ cm$
   b. diameter $d = 10\ m$

5. A circular cylinder with $h = 2 \cdot r$, a circular cone with $s = 2 \cdot r$ and a sphere have the same radius r=10 cm. Calculate the surface and the volume of the three solids.

Vocabulary

Englisch	Deutsch
circular cylinder	Drehzylinder
surface	Oberfläche
can	Dose
diameter	Durchmesser
cone	Kegel
slant height	Mantellinie
sphere	Kugel

Solutions

1.

a. $O \approx 1747.05\ cm^2$ $(1747.0500 \ldots)$
b. $O \approx 1019.80\ cm^2$ $(1019.8017 \ldots)$

2. $h \approx 12.73\ cm$ $(12.7323 \ldots)$

3. $V \approx 127.23\ cm^3$ $(127.2345 \ldots), s = 7.5\ cm, O \approx 169.65\ cm^2$ $(169.6460 \ldots)$

4.

a. $V \approx 8379.16\ cm^3$ $(8379.1553 \ldots), O \approx 1995.04\ cm^2$ $(1995.0369 \ldots)$
b. $V \approx 523.60\ m^3$ $(523.5987 \ldots), O \approx 314.16\ m^2$ $(314.1592 \ldots)$

5. Circular cylinder: $V \approx 9424.78\ cm^3$ $(9424.7779 \ldots), O \approx 1885\ cm^2$ $(1884.9555 \ldots)$
cone: $V \approx 1813.80\ cm^3$ $(1813.7993 \ldots), O \approx 942.48\ cm^2$ $(942.4777 \ldots)$
sphere: $V \approx 4188.80\ cm^3$ $(4188.7902 \ldots), O \approx 1256.64\ cm^2$ $(1256.6370 \ldots)$