Englische Übungen zu Körper

1. A cuboid has the given lateral edges a, b and c. Calculate the
   a. volume,
   b. surface and
   c. length of its space diagonal and the diagonals of its lateral faces!
      1) a = 45 cm, b = 36 cm, c = 24 cm
      2) a = b = 12 m, c = 6 m
      3) a = b = c = 6.4 m

2. A cuboid has edges with the lengths of 12 cm, 15 cm and 30 cm.
   Calculate its mass if the cuboid is made of silver with density ρ = 10 500 kg/m^3!

3. A cube has edges with the length of 25 cm. Calculate its mass if the cube is made of the given material.

a. Wood (ρ = 500 kg/m^3)
b. Glass (ρ = 2 500 kg/m^3)
c. Gold (ρ = 19 300 kg/m^3)

4. Choose to complete the following sentence correctly.
The ____①____ of a pyramid with square base of six centimetres and hight of 5 centimetres is calculated with ____②____.

①	
O	mass
O	area
O	volume

②	
O	$6^2 \cdot 5$
O	$6 \cdot 2 \cdot 5$
O	$6^2 + 5^2$

Vocabulary

Englisch	Deutsch
curboid	Quader
lateral edge	Seitenkante
lateral face	Seitenfläche
volume	Rauminhalt, Volumen
surface	Inhalt der Oberfläche
diagonals of a lateral face	Flächendiagonale
cuboid	Quader
edge	Kante
mass	Masse
silver	Silber
density	Dichte
cube	Würfel
space diagonal	Raumdiagonale

Solutions

1.

a.

1) $V \approx 38\,900\ cm^3$
2) O ≈ 7 130 cm²
3) $d_1 \approx 58\ cm;\ d_2 = 51\ cm;\ d_3 \approx 43\ cm; d \approx 62\ cm$

b.

1) $V = 864\ m^3$
2) $O = 576\ m^2$
3) $d_1 \approx 17\ m;\ d_2 = 13.4\ m;\ d_3 \approx 13.4\ m; d = 18\ cm$

c.

1) $V \approx 252\ m^2$
2) $O \approx 246\ m^2$
3) $d_1 \approx 9.1\ m; d \approx 11.1\ m$

2. The mass is 56.7 kg.

3.

a. 7.8 kg
b. 39 kg
c. 302 kg

4. The volume of a pyramid with square base of six centimetres and hight of 5 centimetres is calculated with 6 · 2 · 5.