

## Chemistry

### Electroactivity of Elements

density 1 g/cm<sup>3</sup>

### Substance

c concentration of acid Mol/L 1  
 pK constance of acid strength 1  
 pH pH value 1

## Engineering

### Construction engineering

f frequency 500 Hz  
 J momentum of inertia 5 kg\*m<sup>2</sup>  
 M torque 4 N\*m  
 F force 20 N

### Electrical engineering

F force 3 N  
 A cross-sectional area 10 mm<sup>2</sup>  
 I electrical current 5 A  
 P power 1000 W  
 U voltage 220 V  
 W electrical work 7 J  
 Q electric charge 3 C  
 C capacitance 1 F  
 m mass 6 kg  
 B magnetic flux density 1 T  
 v velocity 7 m/s  
 efficiency 30 %  
 angular velocity 5 rad/s  
 permittivity 2 F/m  
 wavelength 600 km  
 f frequency 50 Hz  
 E electric field strength 100 V/m  
 R electrical resistance 100 Ohm

### Mechanical engineering

E energy 400 J  
 m mass / Masse 80 kg  
 v velocity / Geschwindigkeit 8 m/s  
 r radius / Radius 20 m  
 hk Stroke / Hub am Kurbeltrieb 1 m  
 n Revolutions / Drehzahl 600 1/min  
 d Diameter / Durchmesser 10 mm  
 s Way / Weg 60 km  
 t Time / Zeit 1 h  
 h height / Höhe 500 m  
 Fn Normal force / Normalkraft 10 N  
 v1 Top speed / Anfangsgeschwindigkeit 150 m/s  
 F force 3 N

**General formulas**

## Miscellaneous (unassigned)

a0	a0	1 m
	density	1 g/cm <sup>3</sup>

**Mathematics**

## Geometry

a	side of a triangle	3 cm
x	distance	10 cm
y	distance	7 cm
U	circumference	15 cm
A	area	4 cm <sup>2</sup>
r	radius	3 cm
h	height	1 mm
V	volume	5 mm <sup>3</sup>
d	diameter	2 mm
	plane angle	30 °
	plane angle	45 °
	plane angle	60 °

## Planimetry

a	length of a side	10 cm
b	length of a side	4 cm
c	length of a side of a triangle	8 cm
	plane angle opposite to side a	30 °
	plane angle opposite to side b	40 °
	plane angle opposite to side c	110 °

## Stereometry

V	volume	60 cm <sup>3</sup>
d	diameter	4 cm
r	radius	3 cm
h	height	10 cm

**Physics**

## Classical mechanics

a	acceleration	2 m/s <sup>2</sup>
T	torque	5 N*m
W	work, energy	3 J
J	moment of inertia	8 kg*m <sup>2</sup>
h	height	1 m
F	force	1 N
m	mass	5 kg
	plane angle	30 °
	plane angle	45 °
	plane angle	115 °
	inclination angle	60 °
t	time, duration	1 s
d	distance	10 m
	density	1 kg/m <sup>3</sup>
P	power	1 W
v	velocity	2 m/s

## Physics

### Classical mechanics

r radius 3 m

### Electro Magnetism

I electrical current 4 A  
 B magnetic flux density 2 T  
 permittivity 3 F/m  
 C capacitance 3 F  
 L inductance 3 H  
 E electric field strength 1E+05 V/m  
 A area 7 mm<sup>2</sup>  
 p momentum 4 kg\*(m/s)<sup>2</sup>  
 P power 10 W  
 m mass 5 kg  
 H magnetic field strength 4 A/m  
 l length 8 m  
 r radius 5 mm  
 W energy / work 4 kW\*h  
 Q electric charge 5 C  
 μ permeability 1 H/m  
 f frequency 50 Hz  
 U electric potential difference 20 V

### Hydromechanics

p pressure 1E+05 Pa  
 v velocity 1 m/s  
 Rho density 1 g/cm<sup>3</sup>  
 Q volumetric flow rate 2 m<sup>3</sup>/s  
 v2 velocity at position 2 5 m/s  
 v1 velocity at position 1 1 m/s  
 A1 cross-sectional area at position 1 50 cm<sup>2</sup>  
 A2 cross sectional area at position 2 10 cm<sup>2</sup>  
 density 1 kg/m<sup>3</sup>

### Kinematics

v velocity 3 m/s  
 t time 4 s  
 m mass 2 kg  
 d distance 20 m  
 r distance, radius 2 m  
 p momentum 5 kg\*(m/s)<sup>2</sup>  
 v0 velocity at beginning 5 m/s

### Nuclear physics

A0 activity at time zero 50 Bq  
 Thalf half-life of a radioactive substance 1 h  
 m mass 1E-27 kg  
 v velocity 2E+08 m/s  
 frequency 1 Hz

## Physics

### Nuclear physics

H	dose equivalent	1 Sv
D	absorbed dose of radiation	1 Gy
	decay constant	1 1/s

### Optics and Acoustics

A	area	8 m <sup>2</sup>
f	frequency	1000 Hz
p	pressure	1E+05 Pa
t	time	5 s
T	period of oscillation	5 s
v	wave speed	4 m/s
x	position	3 m
y	amplitude	2 cm
n	refractive index	1
	wavelength	1 m
	wavenumber	1 1/m

### Thermodynamics

T	thermodyn. temperature	300 K
p	pressure	9 Pa
V	Volume	5 L
Ek	kinetic energy	3 J
n	number of moles	5 mol
t	Celsius Temperatur	20 °C