

FYSICA FORMULEOVERZICHT

HOOFDSTUK 1-10

Hoofdstuk 1: Druk



$$p = \frac{F}{A}$$

$$p_{\text{atm}} = 101,325 \text{ Pa}$$

$$p_{\text{hydro}} = \rho \cdot g \cdot h$$

$$p_{\text{totaal}} = p_{\text{atm}} + p_{\text{hydro}}$$

p = druk (Pa)
 F = kracht (N)
 A = oppervlakte (m²)
 ρ = dichtheid (kg/m³)
 g = valversnelling (m/s²)
 h = hoogte (m)

Hoofdstuk 2: Gaswetten en warmteleer



$$T(K) = \theta(^{\circ}\text{C}) + 273,15$$

$$p \cdot V = \text{const}$$

$$pV = n \cdot R \cdot T$$

$$Q = c \cdot m \cdot \Delta T$$

$p \cdot V = \text{const}$
 $p \cdot V = \text{const}$
 $p \cdot V = n \cdot R \cdot \text{tmpt}$
 $Q = c \cdot m \cdot \Delta T$
 $Q = c \cdot m \cdot \Delta T$ const ("T")

Hoofdstuk 3: Elektrostatica



$$e = 1,60 \cdot 10^{-19} \text{ C}$$

$$F = k \cdot \frac{|q_1 \cdot q_2|}{r^2}$$

$$k = 8,99 \cdot 10^9 \text{ Nm}^2/\text{C}^2$$

$$E = F/q$$

e = point charges
 F = field
 E = charges (Pa)

Hoofdstuk 4: Elektrodynamica



$$I = \frac{\Delta Q}{\Delta t}$$

$$U = RI$$

$$R = \frac{\Delta_1}{\Delta t} + \frac{R_2}{R_2}$$

$$P = E/t$$

U = resistanc (A)
 U = seristante (V, parallelre (RO))
 $= \frac{U}{R_1} + \frac{R_1}{R_2}$
 B = resistanc (AA)
 P = parallelle (k)

Hoofdstuk 5: Elektromagnetisme



Lorentzkracht

$$F_L = B \cdot I \cdot L \cdot \sin\theta$$

Magneetveld rechte geleider / solenoïde:

$$F = B \frac{m \cdot \theta}{L}$$

$$E = R \cdot B \frac{d\theta}{r^2}$$

F_L = lorentz-kracht (N)

Hoofdstuk 6: Kernfysica



$$\text{Aktivität: } A = \lambda \cdot N \quad \text{Decay } N(t)$$

$$N(t) = N_0 \cdot e^{-\lambda t}$$

Hoofdstuk 7: Kinematica



$$\text{ERB} \quad x(t) = x_0 + v \cdot t$$

$$\text{EVRB} \quad x(t) = x_0 + v_0 \cdot t + \frac{1}{2} \cdot a \cdot t^2$$

Vrije val:

$$s(t) = x_{0t} + v_0 \cdot t$$

$$xv_0 = \frac{1}{2} s$$

$$N(t) = \rho(t) = F_v \cdot v_0 \cdot e^\lambda$$

Hoofdstuk 8: Dynamica



$$F_z = m \cdot g$$

$$F_v = k \cdot x$$

$$W = F \cdot d \cdot \cos\theta$$

$$E_{\text{kin}} = \frac{1}{2} \cdot m \cdot v^2$$

$$E_{\text{kin}} = \frac{1}{2} \cdot m \cdot v^2$$

Wrijving: $\mu_{s,k}$

Hoofdstuk 9 & 10:

Trillingen, golven en geluid



$$\text{Staande golven: } \lambda = 2L$$

$$\text{Geluidsintensiteit: } I = \frac{P}{A}$$