

FIZIKA POTAPLJANJA

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UVOD

FIZIKA

OPISUJE SVET V KATEREM ŽIVIMO

MERITVE

NAPAKE

ZAKONITOSTI

KOMPLEKSNI SISTEMI

POENOSTAVLJENI MODELI

PRIBLIŽNI

NAPOVEDI

**KLJUB VELIKIM ODSSTOPANJEM
KVALITATIVNI REZULTATI**

NE UKVARJAJMO SE Z MALENKOSTMI

ZANIMAJMO SE ZA SPLOŠNE ZAKONITOSTI

OCENJEVANJE REDOV VELIKOSTI

ZRAK IN VODA

21% KISIK

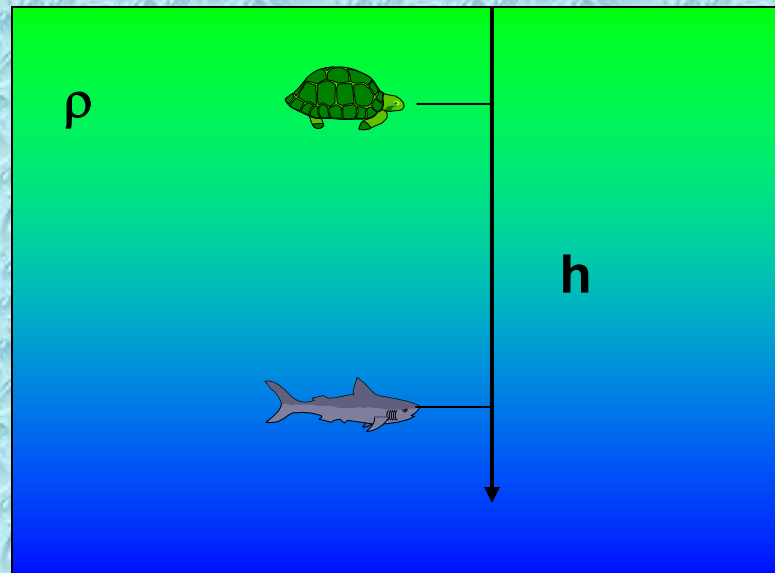
78% DUŠIK

1% OSTALI PLINI

$$\rho = 1,3 \text{ kg/m}^3$$

$$\rho = 1000 \text{ kg/m}^3$$

TLAK



$$p = p_0 + \rho gh$$

10 m ; $\Delta p = 1 \text{ bar}$

PLINSKI ZAKONI

$$p_0 V_0 / T_0 = p_1 V_1 / T_1$$

Boyle:

$$p_0 V_0 = p_1 V_1$$

Gay-Lussac

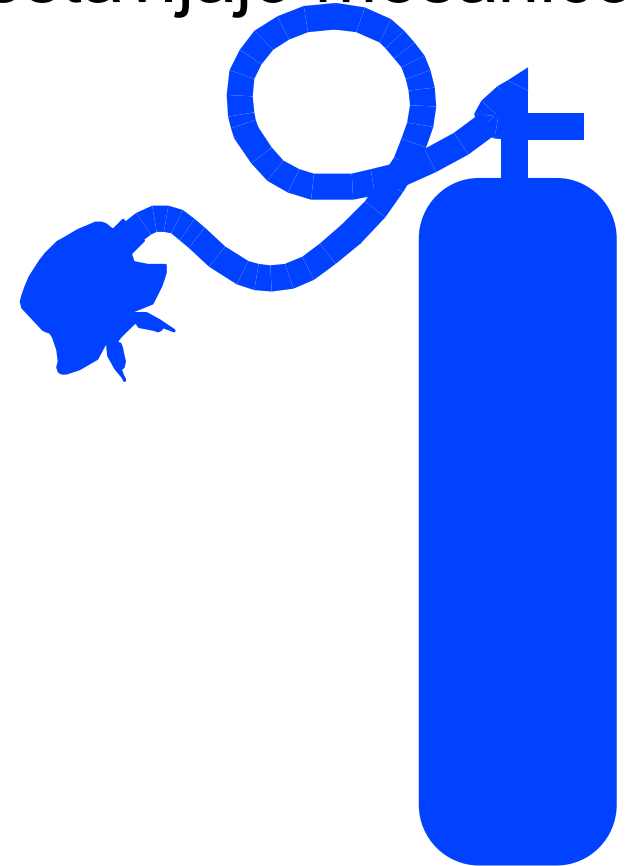
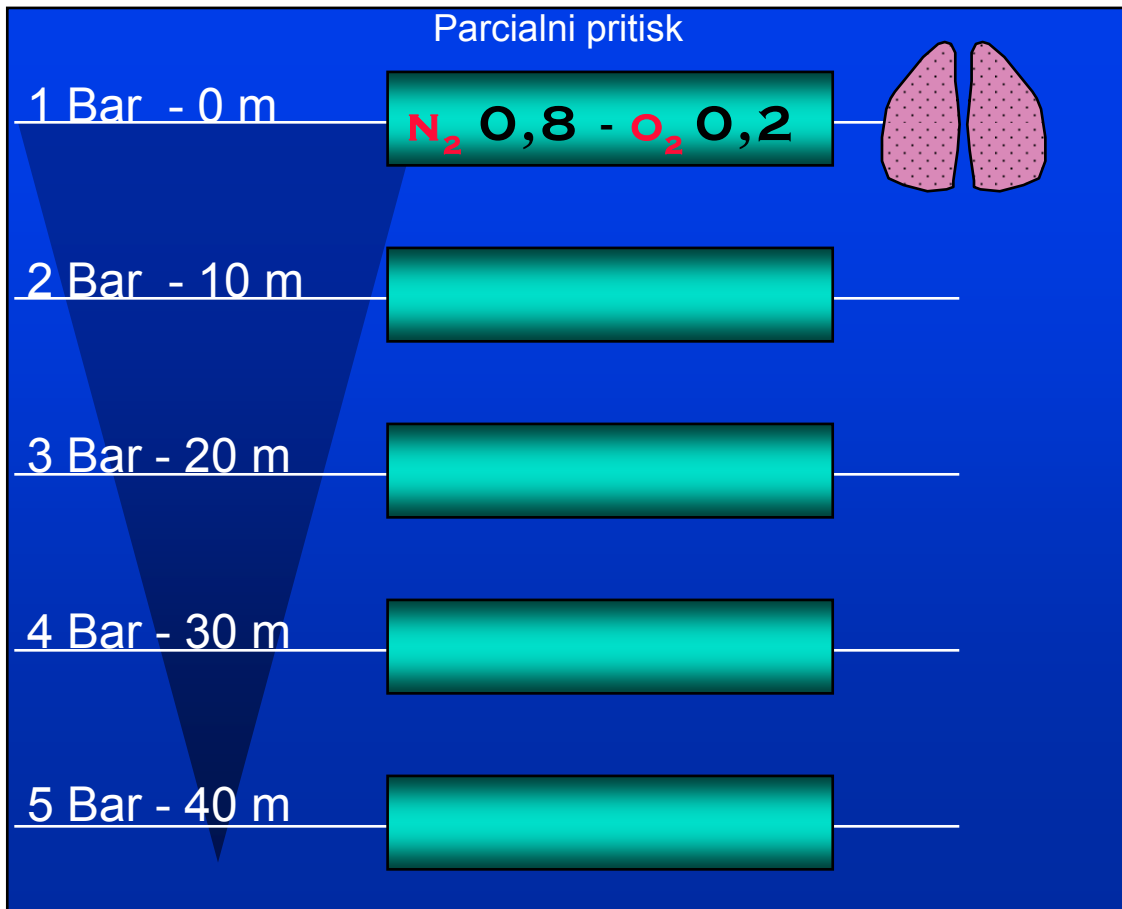
$$p_0 / T_0 = p_1 / T_1$$

Dalton

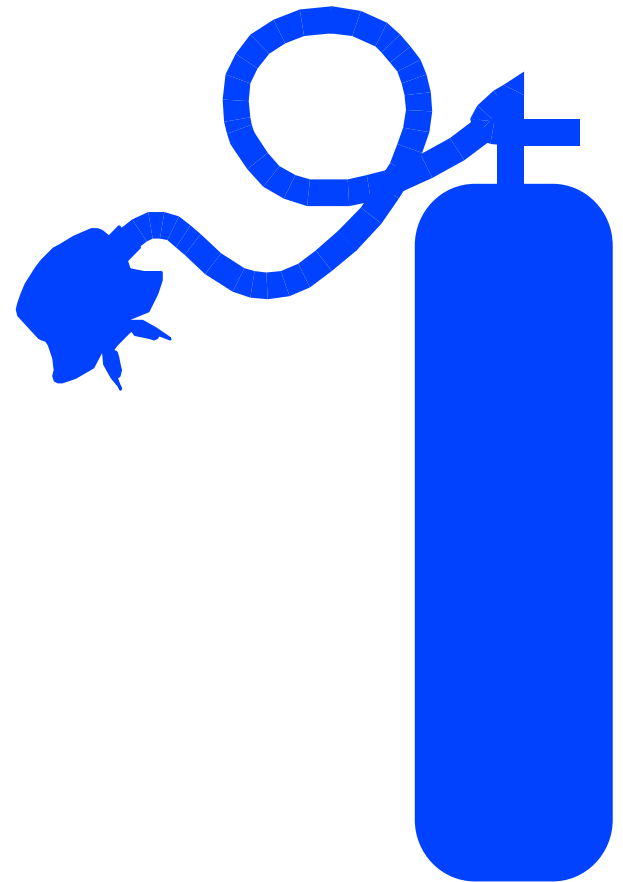
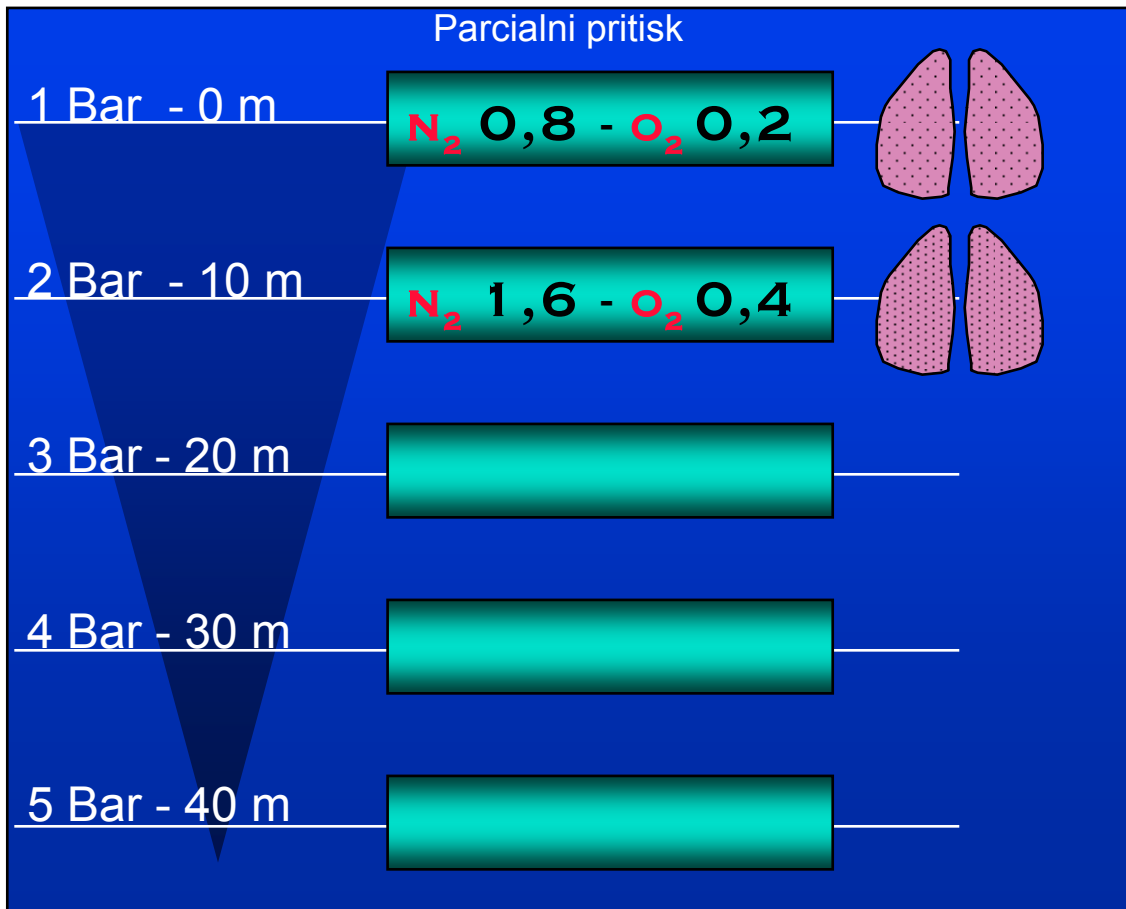
$$p_{zraka} = p_{N_2} + p_{O_2} + p_{OP}$$

Dalton

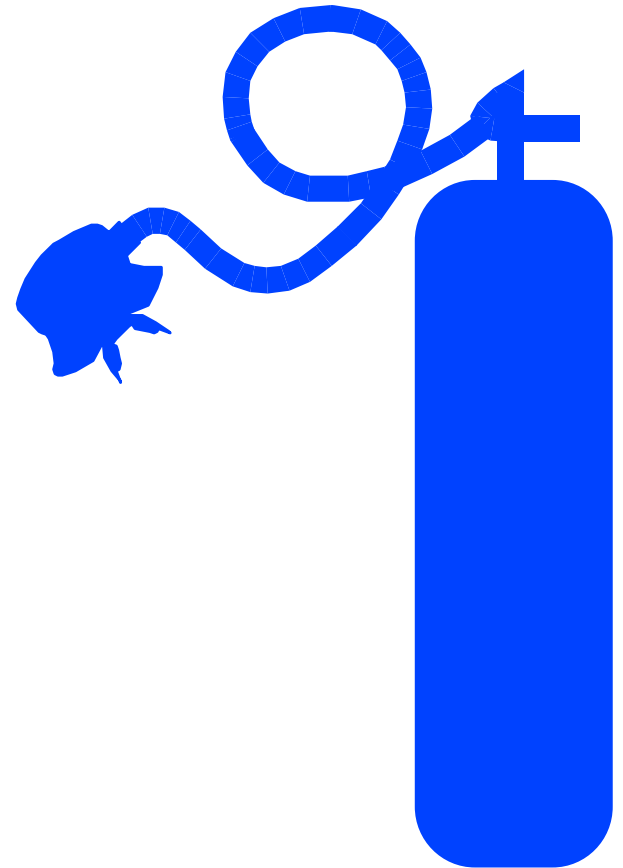
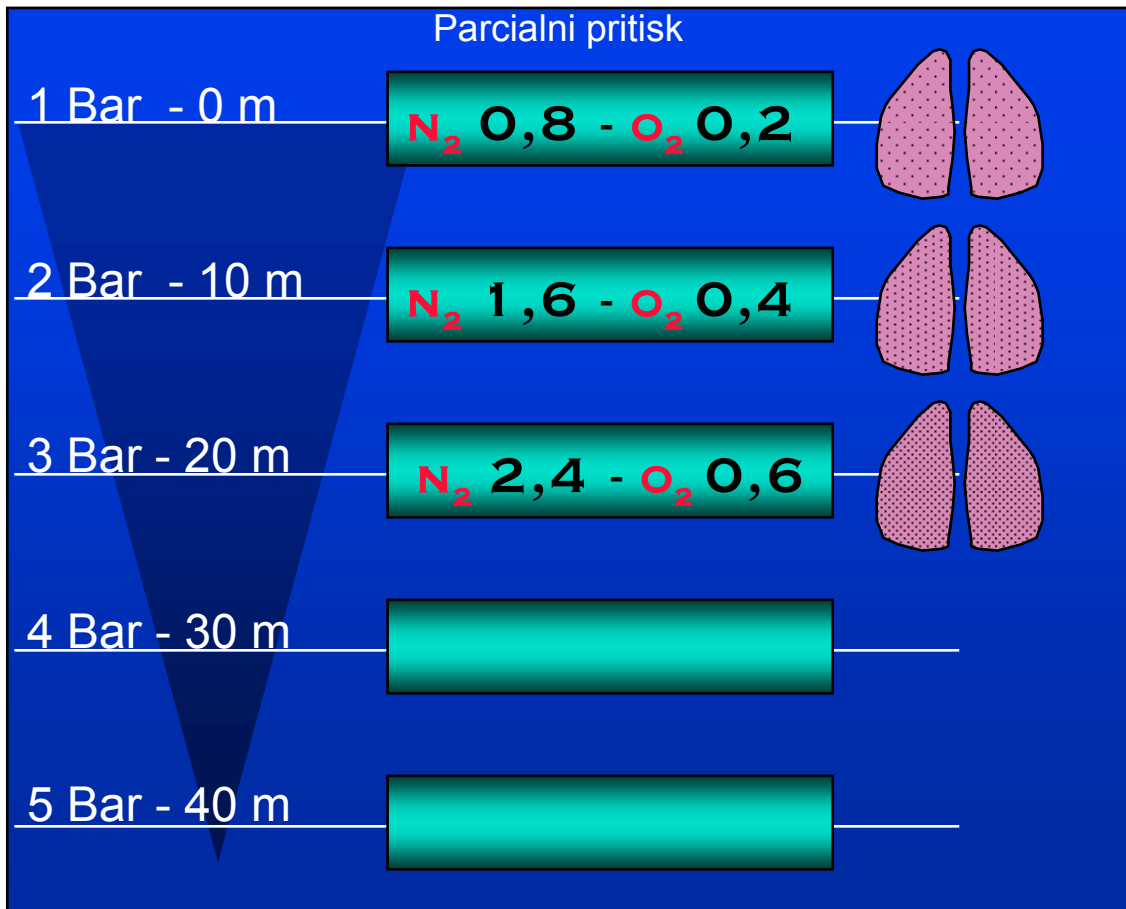
Pritisk mešanice plinov
je enak vsoti parcialnih
pritiskov plinov, ki
sestavljajo mešanico



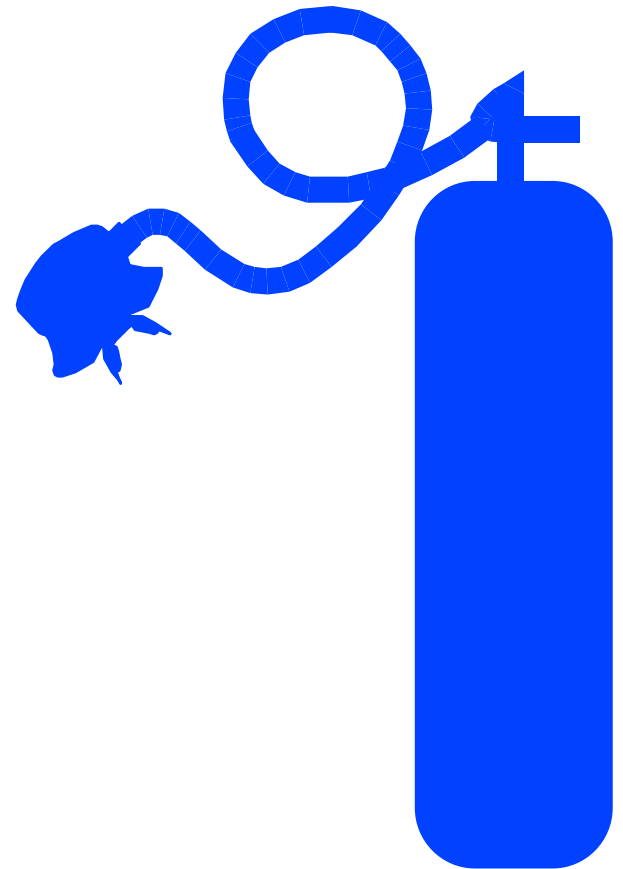
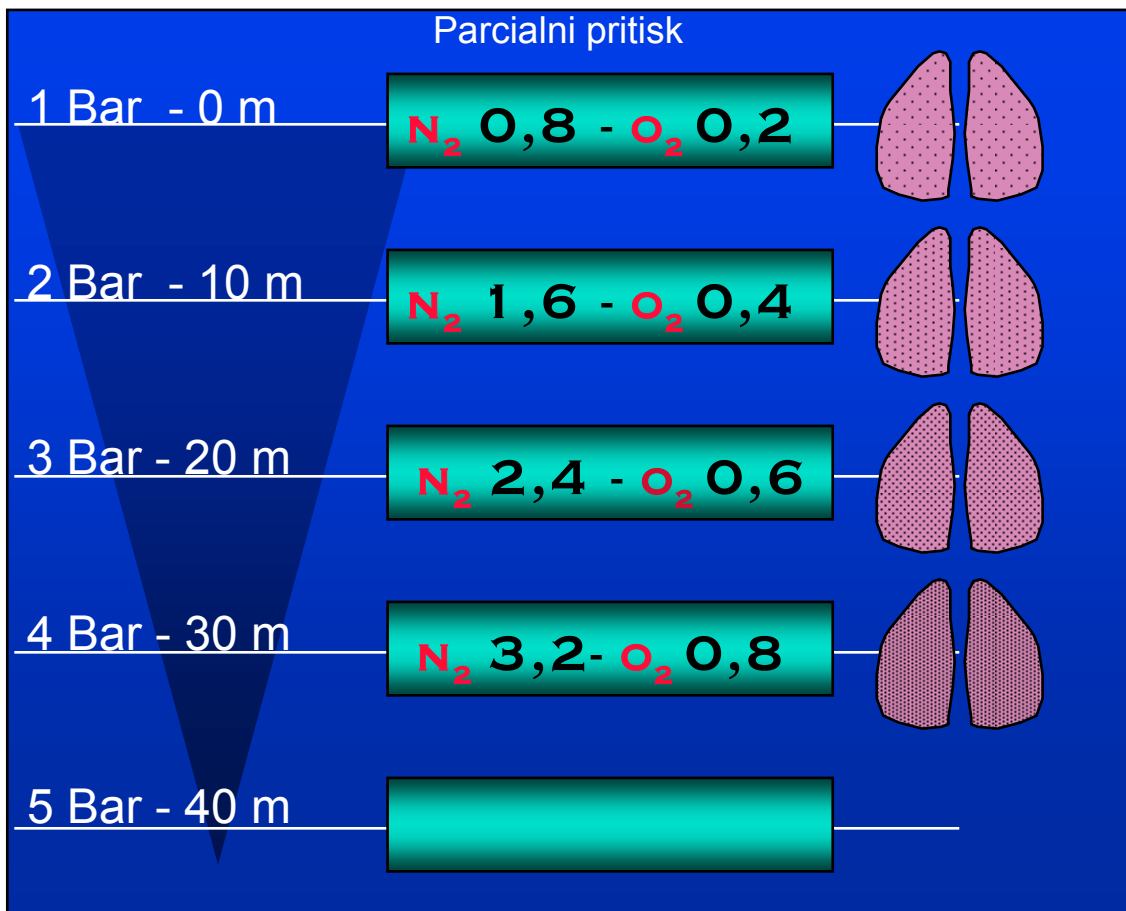
Dalton



Dalton

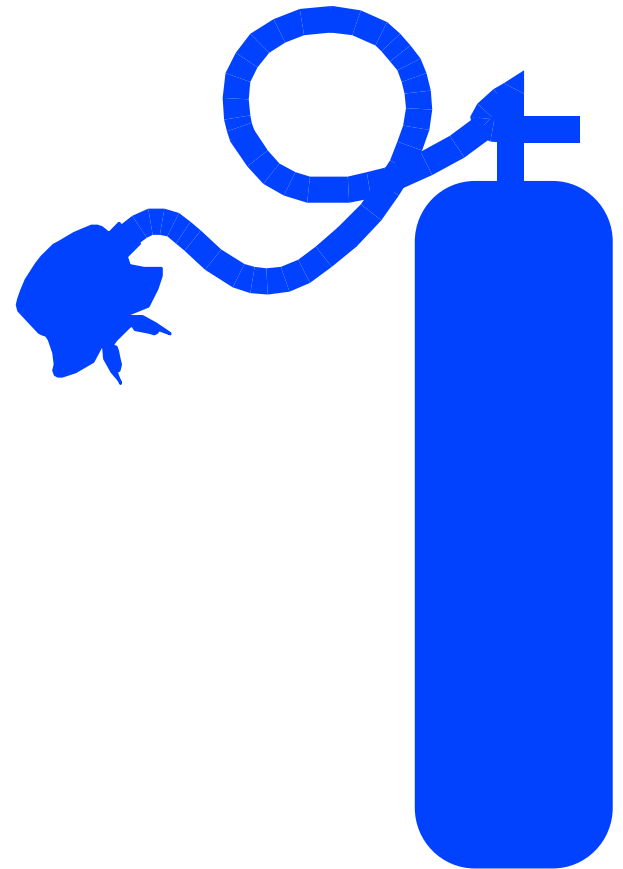
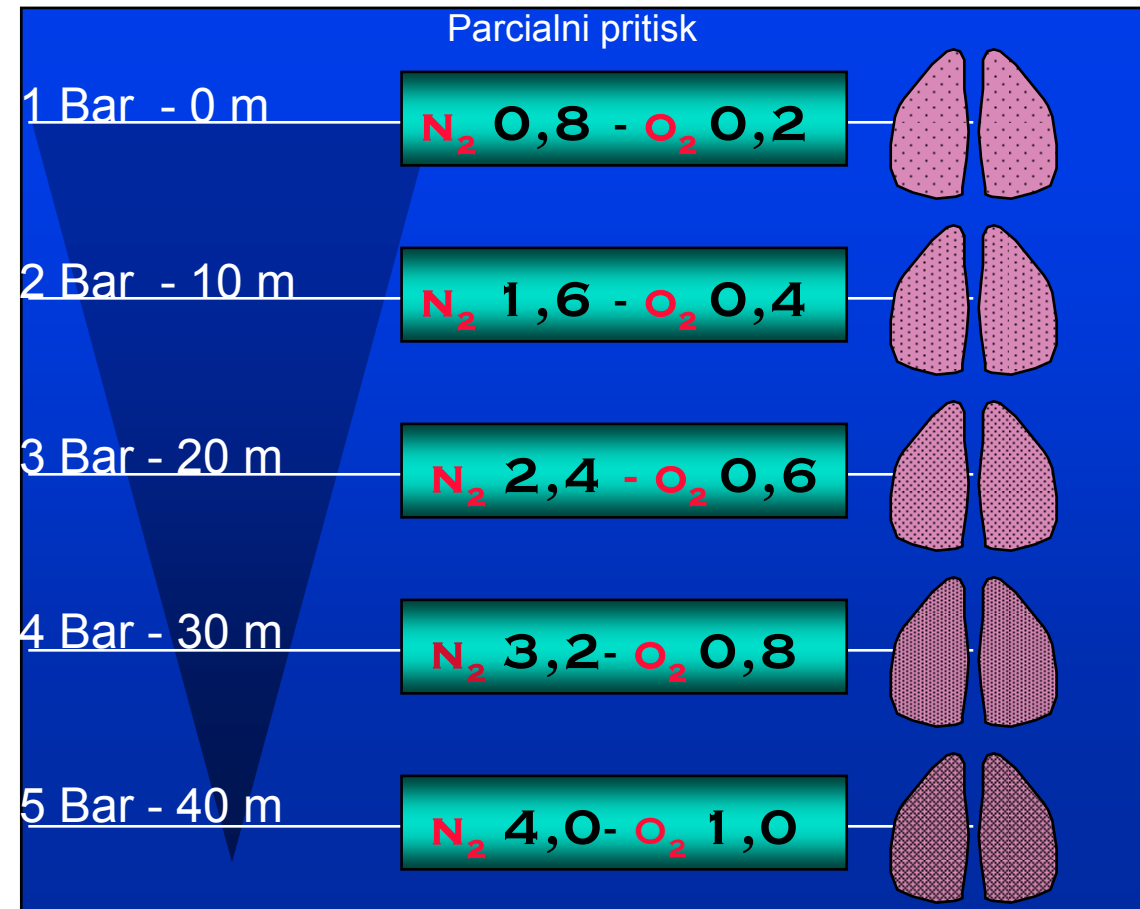


Dalton



Dalton

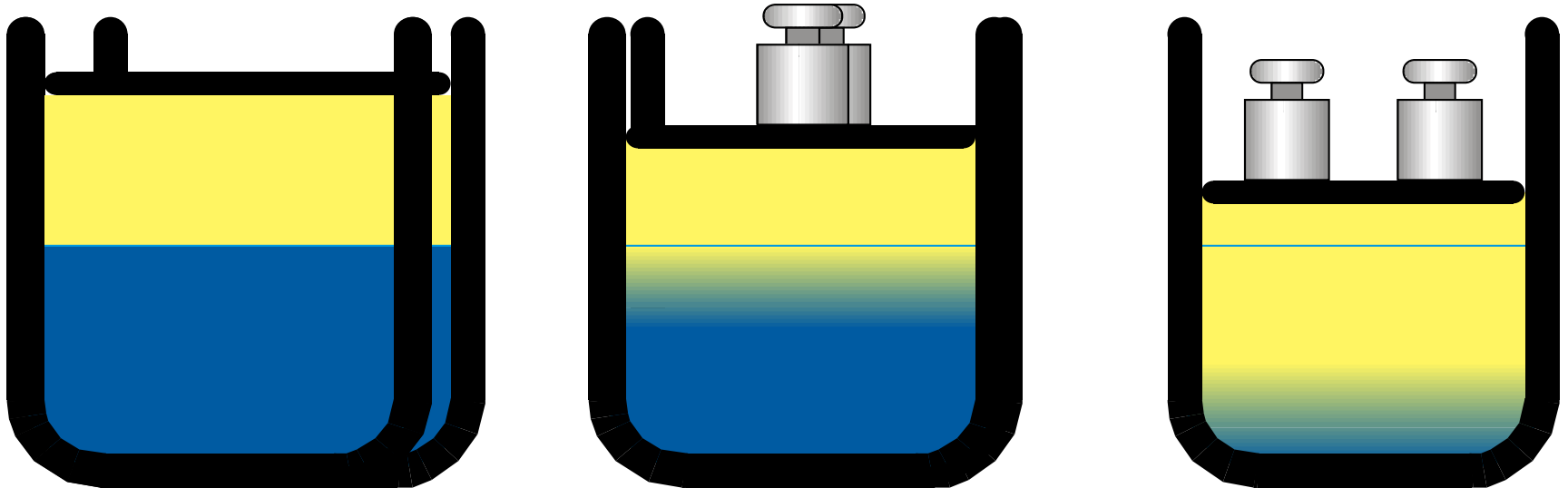
Parcialni pritisk



Henry

Količina plina, raztopljenega v tekočini, je pri konstantni temperaturi premosorazmerna parcialnemu pritisku plina nad tekočino

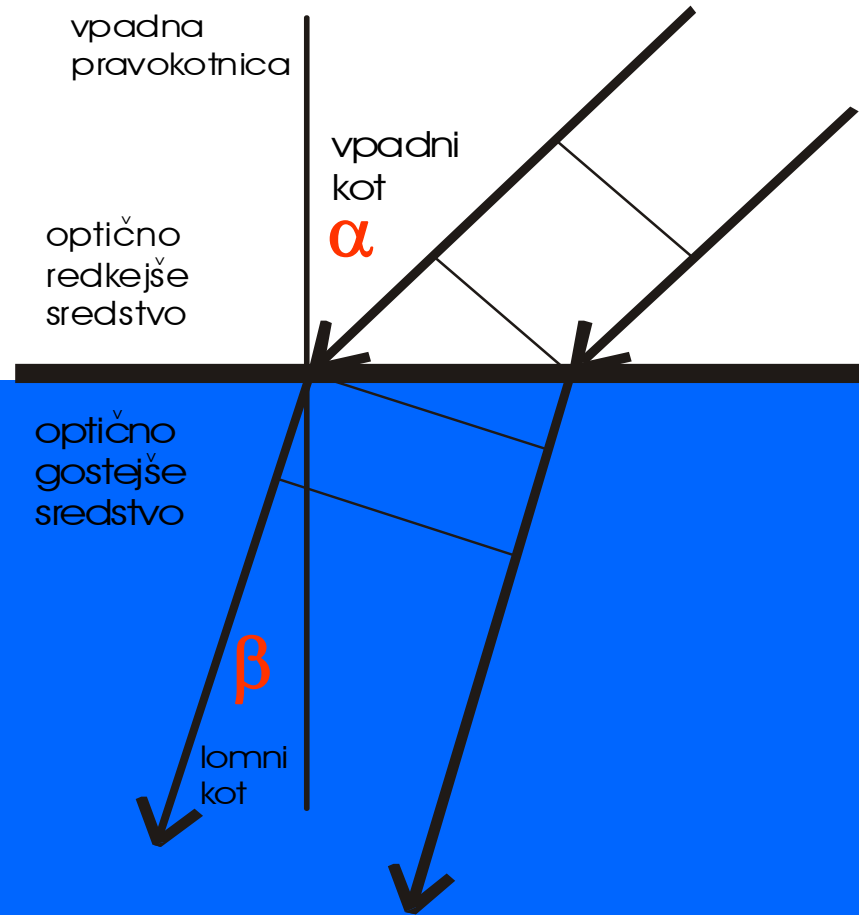
TEKOČINA



SVETLOBA

LOM

$$\sin(\alpha)/\sin(\beta) = n$$



PRIMERI

PLOVNOST

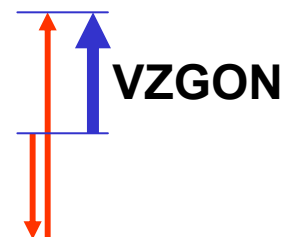
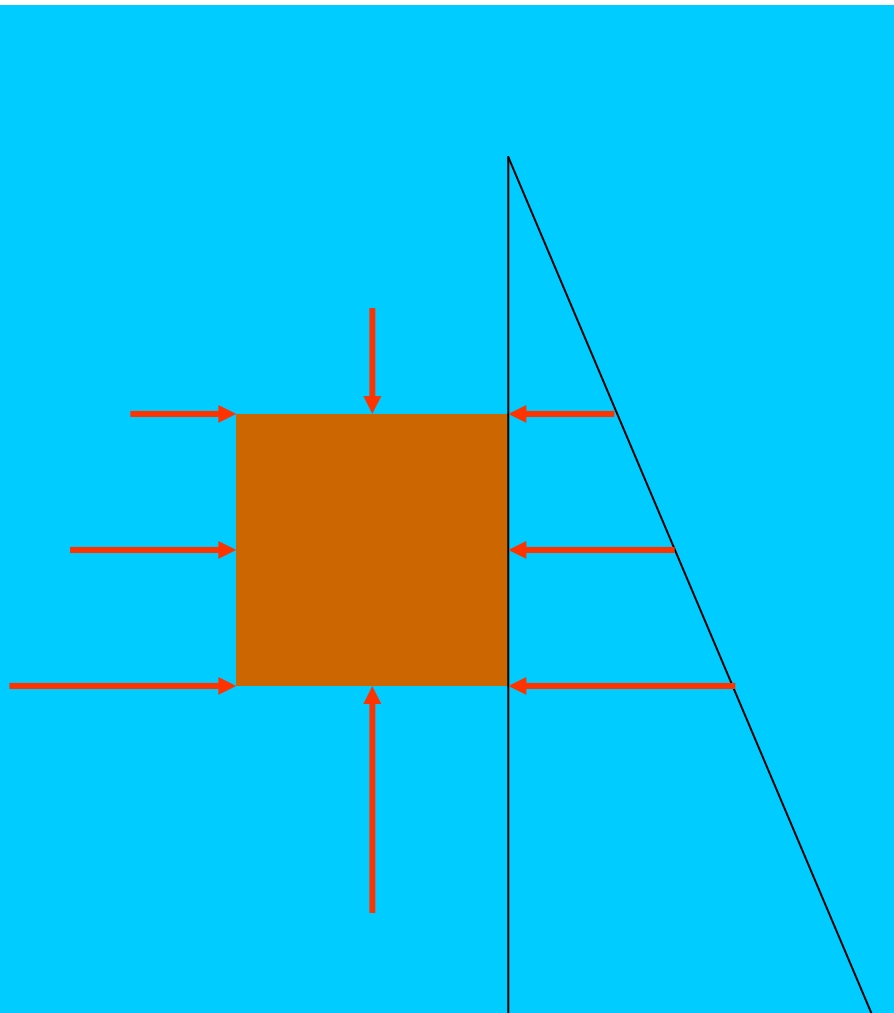
SLUH V VODI

VID V VODI

OHLAJANJE POTAPLJAČEV

PLOVNOST

ARHIMEDOV ZAKON



SLUH V VODI

zvočna hitrost:

zrak 340 m/s

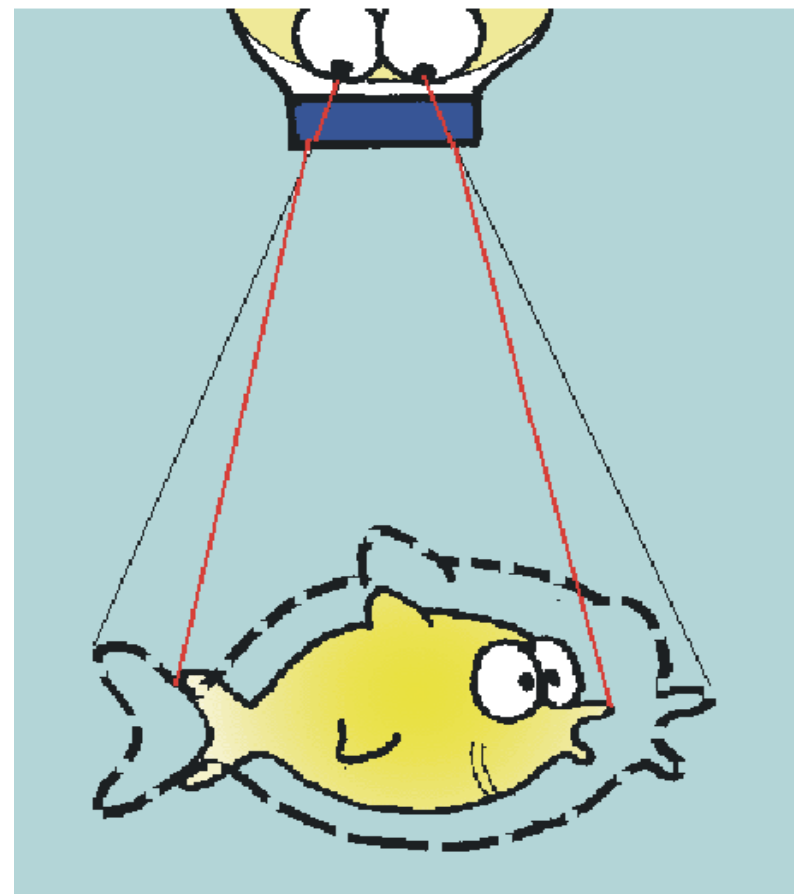
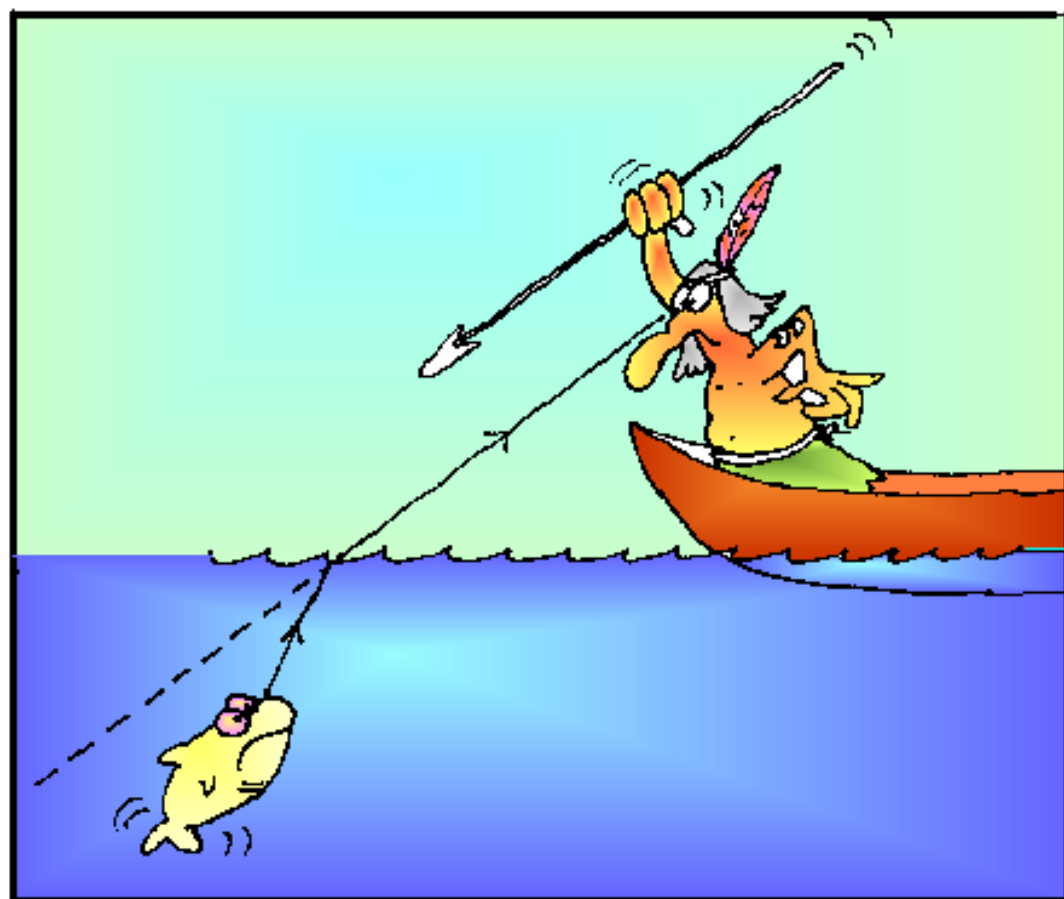
voda 1500 m/s

sluh preko kosti

**~~“STEREO”
POSLUŠANJE~~**

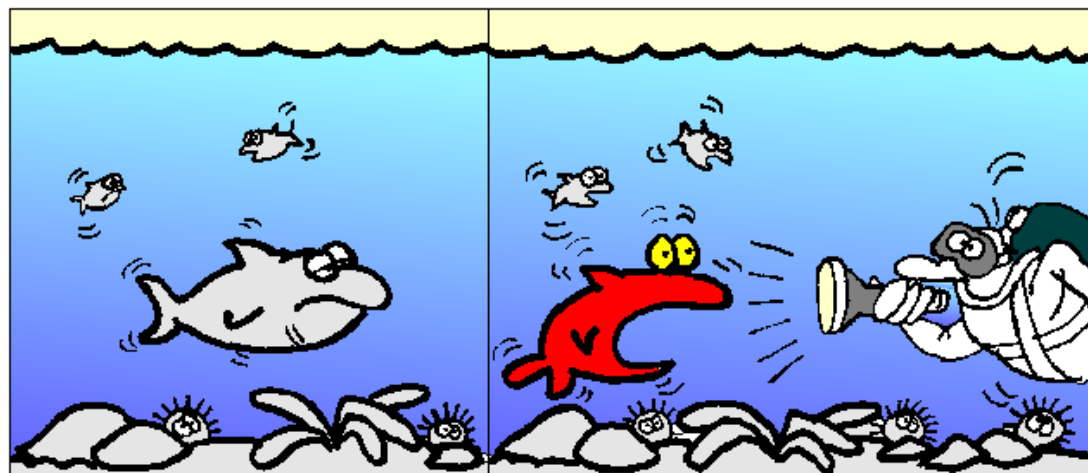
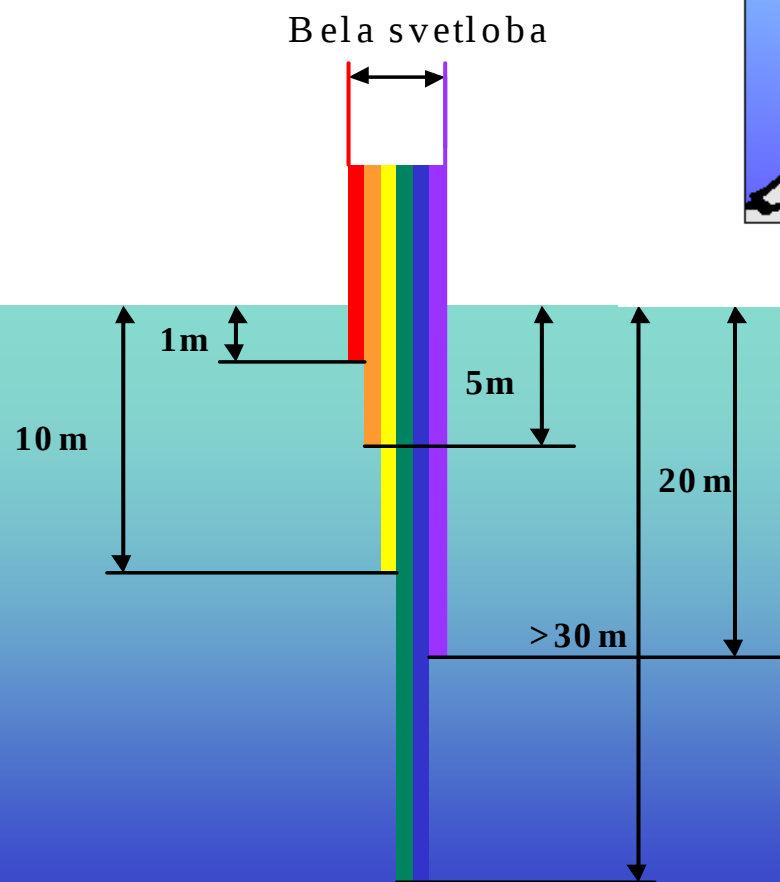
VID V VODI

LOM



SVETLOBA

ABSORBCIJA



OHLAJANJE

TOPLOTA

SPREMEMBA TOPLOTE:

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

PREVAJANJE TOPLOTE:

$$P_Q = S \lambda \Delta T / d$$

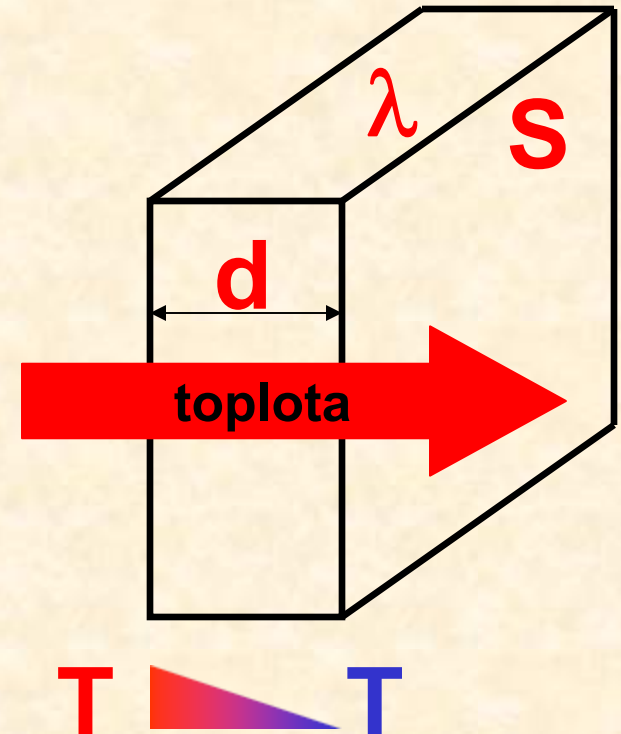
m: masa

S: površina

λ : toplotna prevodnost

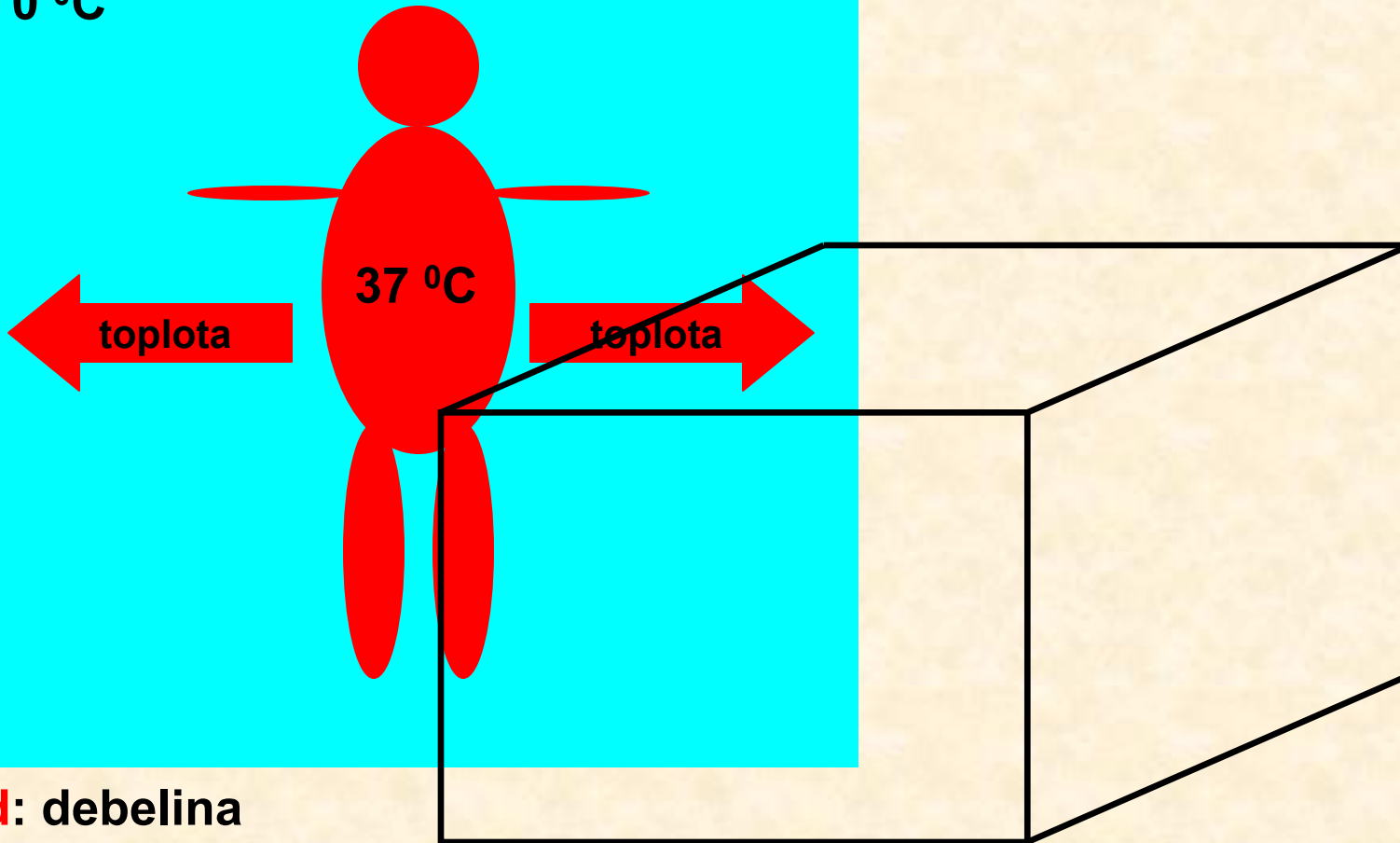
d: debelina

ΔT : temperaturna razlika



OHLAJANJE

0 °C



d: debelina

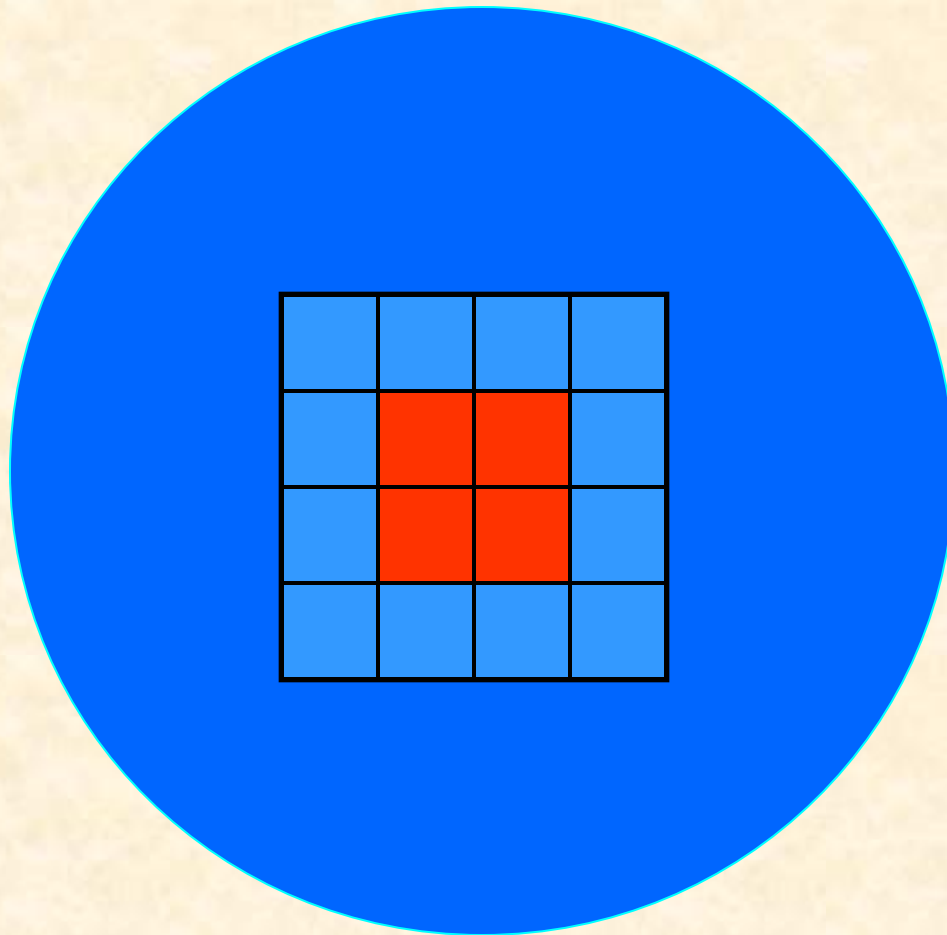
m: masa

S: površina

λ : toplotna prevodnost

ΔT : temperaturna razlika

OHLAJANJE



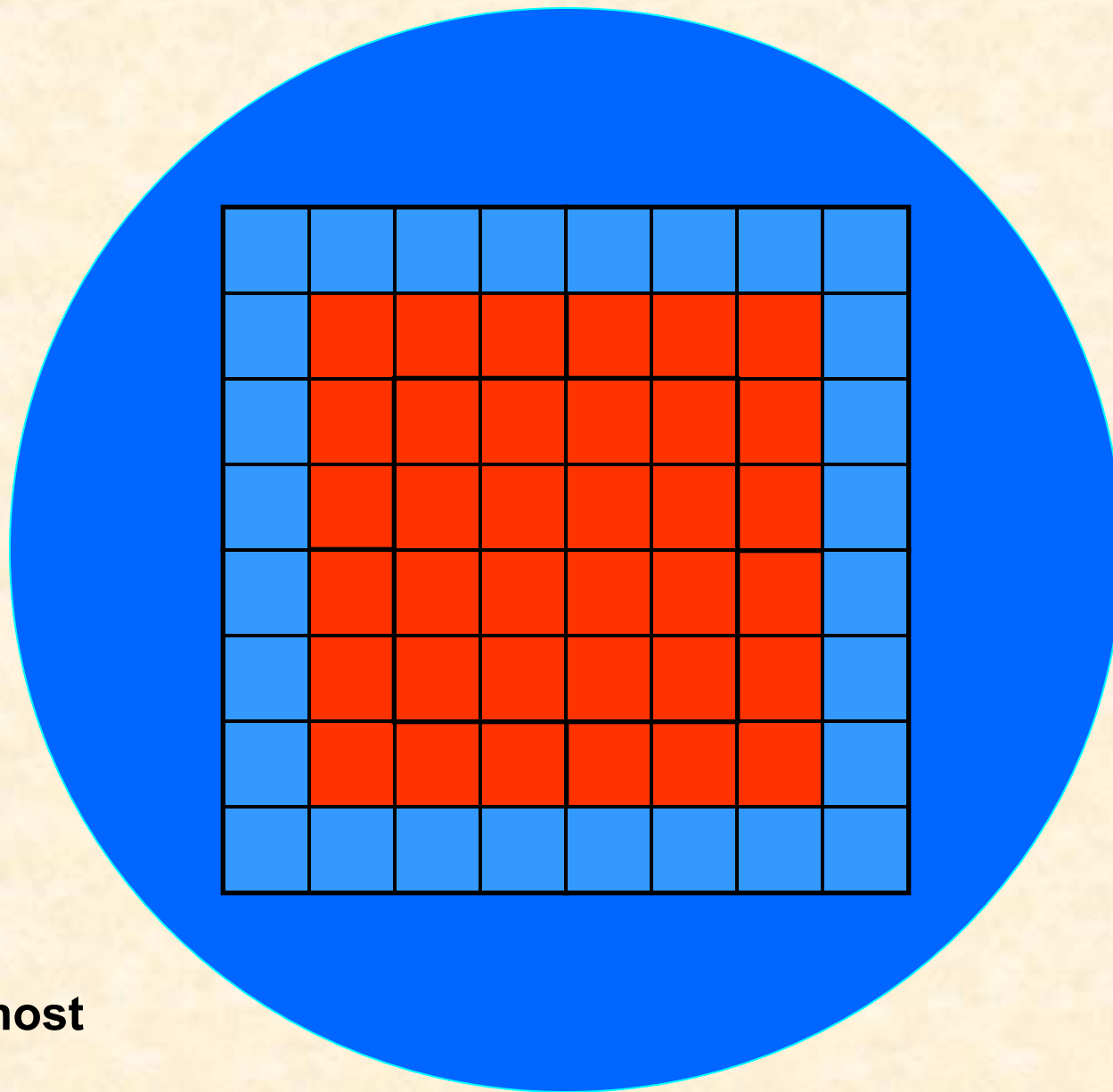
d: debelina

m: masa

S: površina

λ : toplotna prevodnost

OHLAJANJE



d: debelina

m: masa

S: površina

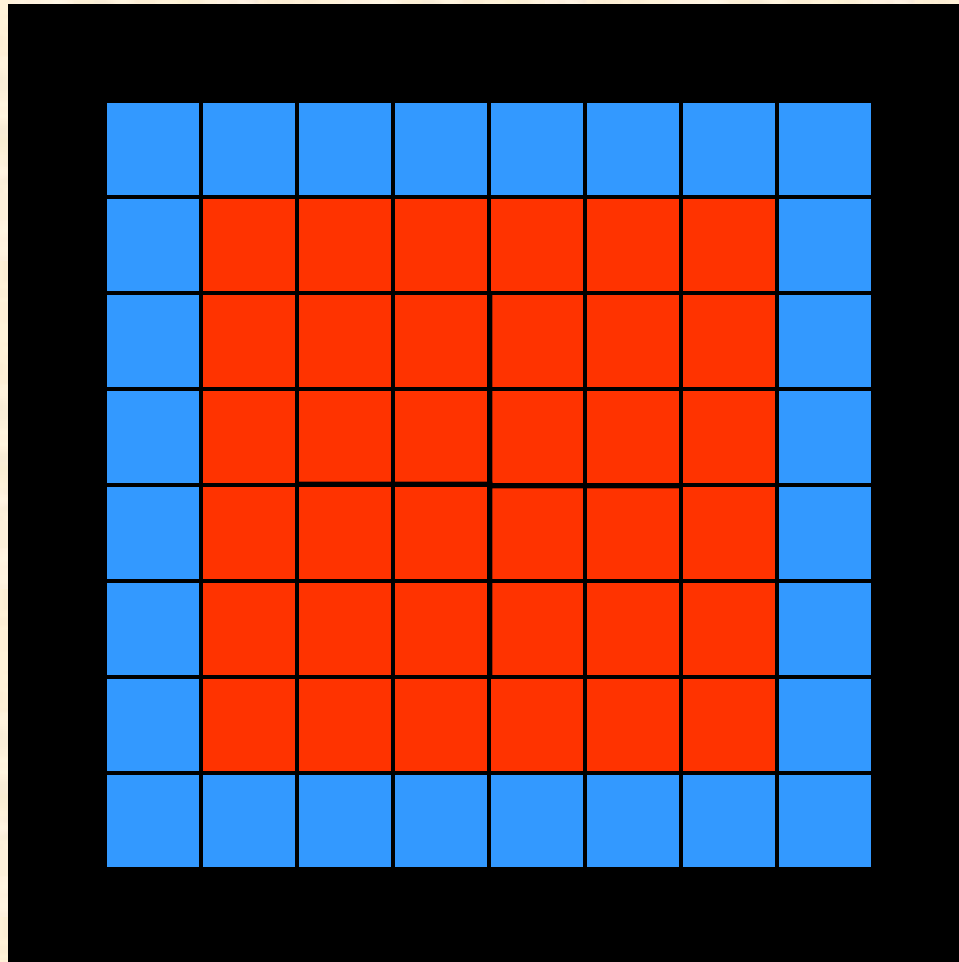
λ : toplotna prevodnost

OHLAJANJE

λ : toplotna prevodnost

d : debelina

$$\lambda_{\text{vode}} = 23 \lambda_{\text{zrak}}$$



OHLAJANJE

OHLAJANJE TELESA JE ZELO POVEČANO

ΔT  2X  čas potopa  2X

$\lambda_{\text{vode}} = 23 \lambda_{\text{zrak}}$  debelina  23X

kratki potop:
mokra obleka

srednji potop:
suha obleka

dolgi potop:
greta obleka