

80. 1:20000

a) matka kartalla 8 cm

$$\frac{\text{kartta}}{\text{luonto}} \quad \frac{1}{20000} \rightarrow \frac{8 \text{ cm}}{x}$$

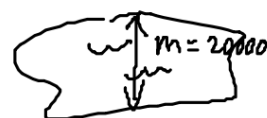
$$x = \underline{160000 \text{ cm}} = \underline{1,6 \text{ km}}$$

b) Matka luonnossa 3,2 km

$$\frac{1}{20000} \rightarrow \frac{x}{3,2 \text{ km}}$$

$$20000x = 3,2 \text{ km} \quad || : 20000$$

$$x = \underline{0,00016 \text{ km}} = \underline{16 \text{ cm}}$$



$$\boxed{m, \text{Hak.} = \frac{n}{m}}$$

c) Pellon ala on 4,2 ha. Peltä on kartalla?

$$\left(\frac{1}{20000}\right)^2 = \frac{x}{4,2 \text{ ha}} \rightarrow \frac{1}{400000000} \rightarrow \frac{x}{4,2 \text{ ha}}$$

$$400\,000\,000\,000\,x = 4,2\text{ ha} \quad //: 4000000000$$

$$x = 0,00000000105\text{ ha}$$

$\underbrace{\hspace{1.5cm}}_a \quad \underbrace{\hspace{1.5cm}}_{m^2} \quad \underbrace{\hspace{1.5cm}}_{dm^2} \quad \underbrace{\hspace{1.5cm}}_{cm^2}$

$$= 1,05\text{ cm}^2$$

V: ala n. 1 cm^2

Esim. Patsaan pienoismalli 1:50,
prenoismallin $V = 1,5\text{ l}$.

$l = dm^3$

Laske patsaan tilavuus.

$$\left(\frac{1}{50}\right)^3 = \frac{1,5\text{ l}}{x}$$

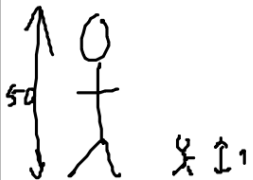
$$\frac{1}{125000} = \frac{1,5\text{ l}}{x}$$

$$x = 187500\text{ l}$$

$\underbrace{\hspace{1.5cm}}_{m^3}$

$$= 187,5\text{ m}^3$$

$$V: \text{n. } 200\text{ m}^3$$



Summa
83.

Ala luonnossa 27 ha, kartan
mittak. 1:20000. Laske ala kartalla.

LM

42,46

55,56

$$\left(\frac{1}{20000}\right)^2 = \frac{x}{27 \text{ ha}}$$

$$\frac{1}{400\,000\,000} \rightarrow \frac{x}{27 \text{ ha}}$$

$$400000000x = 27 \text{ ha} \quad || : 400000000$$

$$x = 6,75 \cdot 10^{-8} \text{ ha}$$

$$x = 0,0000000675 \text{ ha} = 6,75 \text{ cm}^2$$

a m² dm² cm²

$$V: n. 7 \text{ cm}^2$$

SUMMA

S. 47-49:

66,68

69,75

82,86

kerroin 1,30 = 130%

~~Summa~~ **Summa!**

$$a) \frac{1,30}{1} = \frac{x}{8 \text{ cm}}$$

b) ala kartan 1,3²-
kertaistus:

Summa
66.



ala nelinkert.

b) sivut nelinkert. $\rightarrow$ ala $4^2 = 16$ -
kertaistuu
 $\vdots$

d) sivut n -kertaistuu $\rightarrow$ ala n^2 -kertaistuu