

3258

af se frait

Bevis at $h = \frac{ab}{\sqrt{a^2+b^2}}$

* Pythagoras sats ger.

$$AB^2 = a^2 + b^2$$

$$AB = \sqrt{a^2 + b^2}$$

om likformighet ger

$$\frac{CD}{AC} = \frac{BC}{AB}$$

$$CD = h$$

$$BC = a$$

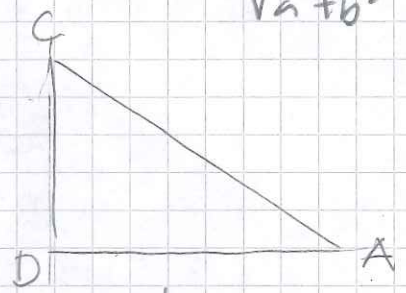
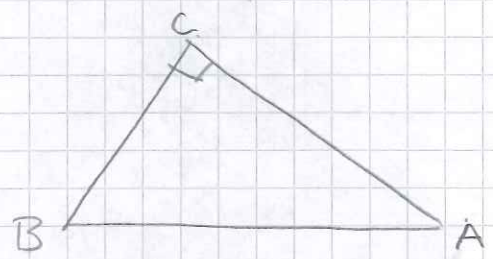
$$AC = b$$

$$AB = \sqrt{a^2 + b^2}$$

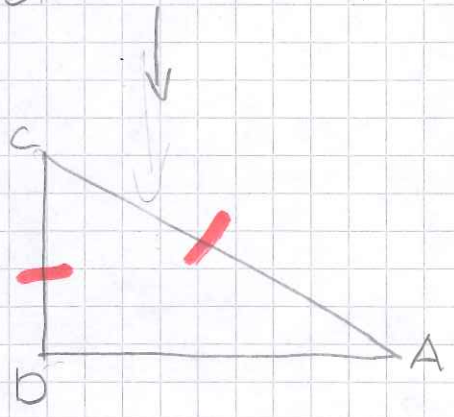
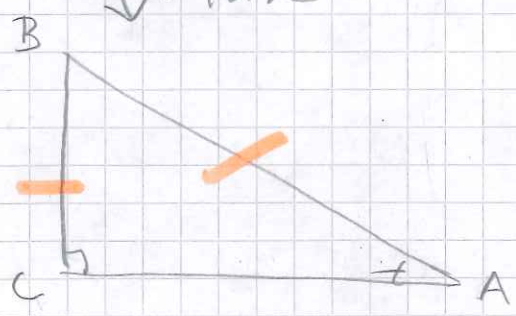
$$\Leftrightarrow \frac{h}{b} = \frac{a}{\sqrt{a^2 + b^2}}$$

\Leftrightarrow

$$h = \frac{a \cdot b}{\sqrt{a^2 + b^2}}$$



rottern

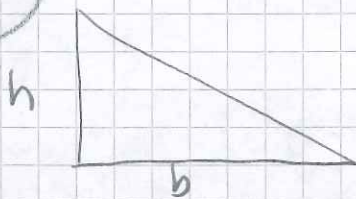


3259

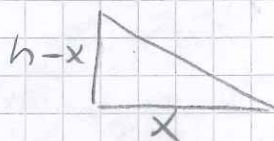
s. 190

3260

a)



Stora triangeln



Lilla triangeln

Likformighet och topptriangelnsatsen ger

$$\frac{x}{b} = \frac{h-x}{h}$$

b)

$$\frac{x}{b} = \frac{h-x}{h}$$

Mutt med b

$$\cancel{b} \cdot \frac{x}{\cancel{b}} = \frac{b(h-x)}{h}$$

$$hx = \frac{b(h-x)}{h}$$

Mutt med h

$$hx = bh - bx$$

$$bx + hx = bh$$

Faktorisera x

$$\frac{x(b+h)}{(b+h)} = \frac{b \cdot h}{b+h}$$

Förkorta med (b+h)

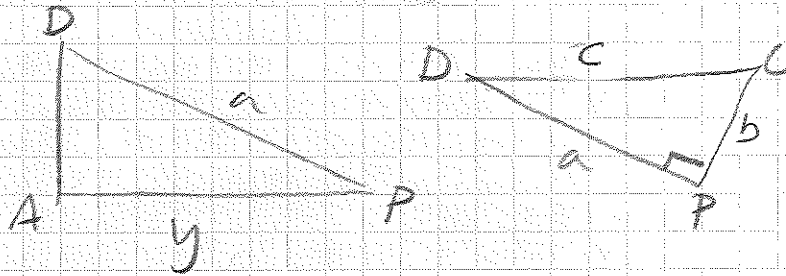
$$x = \frac{bh}{b+h}$$

V3B

3261

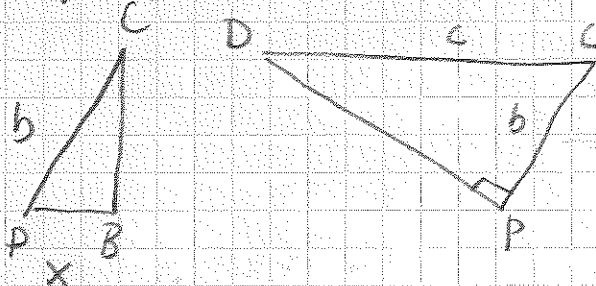
a) Sehnit

b) Höhenmitte gem



$$\frac{y}{a} = \frac{a}{c} \iff y = \frac{a^2}{c}$$

c) Sehnit



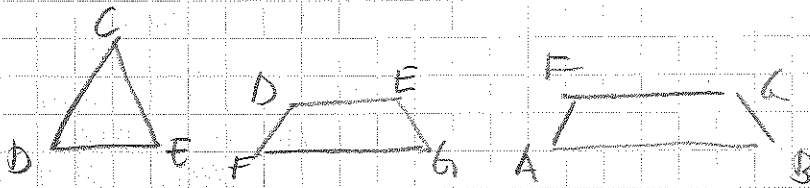
Höhenmitte gem

$$\frac{x}{b} = \frac{b}{c}$$

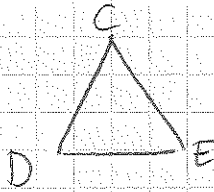
d) Sehnit

3262

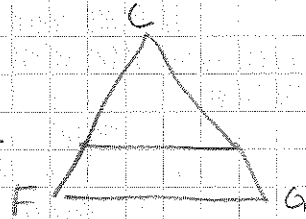
Arcom Vik storm



Detta betyder :

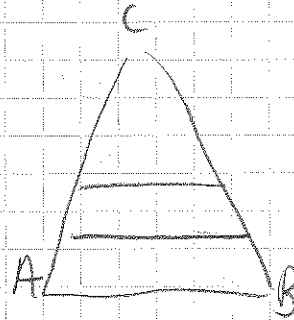


Area 1:e



Area 2:e

(dubbel s_w)
stor



Area 3:e

(tre-dubbel s_w)
stor

dvs $1:2:3$

hängl skolorn blir då $\sqrt{1}:\sqrt{2}:\sqrt{3} \Leftrightarrow 1:\sqrt{2}:\sqrt{3}$

$$\left. \begin{array}{l} AC = \sqrt{3} \\ DC = \sqrt{2} \end{array} \right\} \Rightarrow AF = AC - DC = \sqrt{3} - \sqrt{2}$$