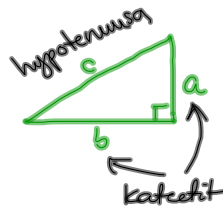


PYTHAGORAAN LAUSE

Suorakulmaisille kolmioille
patee

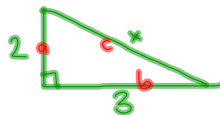
$$a^2 + b^2 = c^2$$



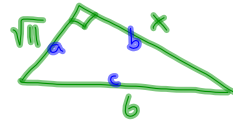
(tai $c^2 = a^2 + b^2$)

⇒ jos 2 tunnetaan, niin
kolmas voidaan ratkaista

esim. ~~...~~



$$\begin{aligned} x^2 &= 2^2 + 3^2 \\ x^2 &= 4 + 9 \\ x^2 &= 13 \quad \parallel \sqrt{} \\ \underline{x} &= \underline{\sqrt{13}} \end{aligned}$$



$$\begin{aligned} \sqrt{11}^2 + x^2 &= 6^2 \\ 11 + x^2 &= 36 \\ x^2 &= 36 - 11 \\ x^2 &= 25 \quad \parallel \sqrt{} \\ \underline{x} &= \underline{5} \end{aligned}$$

⇒ voi olla myös niin, että
useampi sivu on tuntematon



$$x^2 + 6^2 = (x+2)^2 \quad \leftarrow \text{ottaa sulut!}$$

$$x^2 + 36 = (x+2)(x+2)$$

$$x^2 + 36 = x^2 + 2x + 2x + 4$$

$$x^2 + 36 - x^2 - 4x = 4$$

$$-4x = 4 - 36$$

$$-4x = -32 \quad \parallel : (-4)$$

$$x = 8$$

ESIM 3
s. 62

→ kateetti 8, hypotenusa $x+2 = 10$

teht. 97, 98, 99, 100, 101, 102, 103,
105, 107, 108, 111

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$