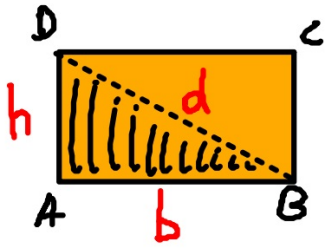
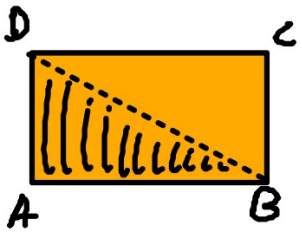


$$BD = \sqrt{AB^2 + AD^2}$$

$$AB = \sqrt{BD^2 - AD^2}$$

$$AD = \sqrt{BD^2 - AB^2}$$



$\overrightarrow{BD} = \frac{5}{3}\overrightarrow{AD}$

$AD + BD = 64\,cm$

I

$P_{RETTANGOLO}$

$A_{RETTANGOLO}$

$BD : AD = 5 : 3$

$64 : BD = 8 : 5$

$BD = \frac{64 \cdot 5}{8} = 40$

$U = (AD + BD) : 8 = 64 : 8 = 8\,cm$

$AD = U \cdot 3 = 8 \cdot 3 = 24\,cm$

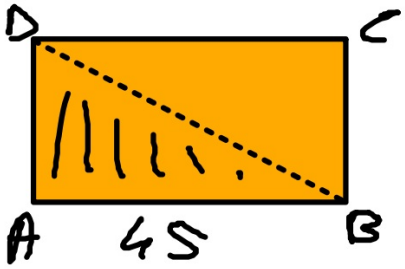
$BD = U \cdot 5 = 8 \cdot 5 = 40\,cm$

$AB = \sqrt{BD^2 - AD^2} = \sqrt{40^2 - 24^2} =$

$= \sqrt{1600 - 576} = \sqrt{1024} = 32\,cm$

$P = (AB + BC) \cdot 2 = (32 + 24) \cdot 2 = 56 \cdot 2 = 112\,cm$

$A = AB \cdot AD = 32 \cdot 24 = 768\,cm^2$



$A = 1260\ cm^2$
$AB = 45\ cm$

BD

$$AD = A : AB = \frac{1260}{45} = 28\ cm$$

$$BD = \sqrt{AD^2 + AB^2} = \sqrt{28^2 + 45^2} = \sqrt{784 + 2025} = \sqrt{2809} = 53\ cm$$