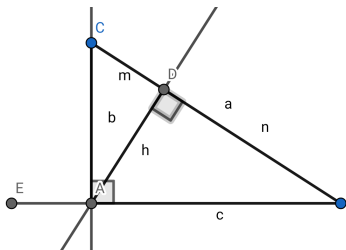


Demonstração do teorema de Pitágoras:

Seja $\triangle ABC$ um triângulo retângulo em A :



$$\begin{aligned} m(\overline{BC}) &= a \\ m(\overline{AC}) &= b \\ m(\overline{AB}) &= c \\ m(\overline{AD}) &= h \\ m(\overline{DB}) &= n \\ m(\overline{DC}) &= m \end{aligned}$$

Pelo caso AA, $\triangle ABC \sim \triangle DAC \sim \triangle DBA \Rightarrow$

$$\Rightarrow \frac{a}{c} = \frac{b}{h} = \frac{c}{n} \wedge \frac{a}{b} = \frac{b}{m} = \frac{c}{h} \Rightarrow$$

$$\Rightarrow ah = bc \wedge an = c^2 \text{ (I)} \wedge bn = hc \wedge am = b^2 \text{ (II)} \wedge bh = cm$$

$$\text{Somando (I) e (II): } a(m+n) = b^2 + c^2 \Rightarrow \boxed{a^2 = b^2 + c^2}$$

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