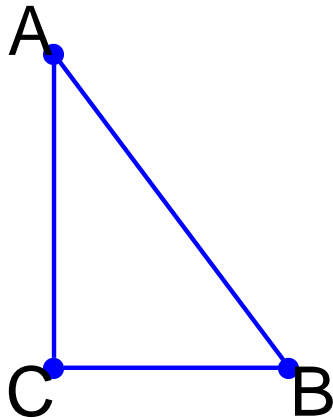

Pythagoras' Theorem

courtesy of Prosper and PStricks

Yvonne Nagel

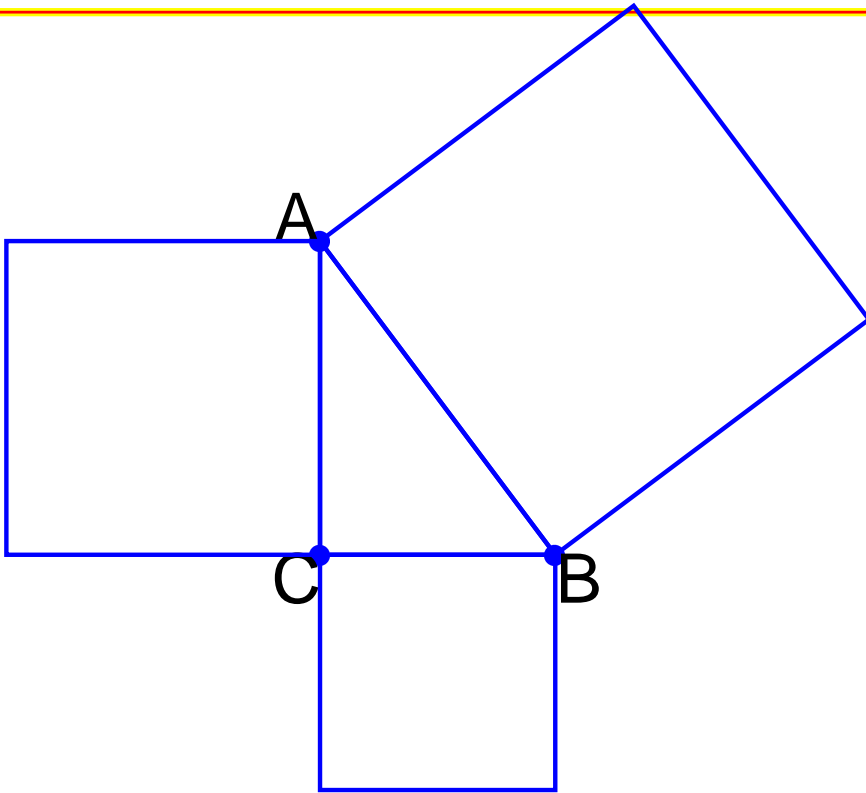
UW Math Dept
Madison, WI

PStrick example



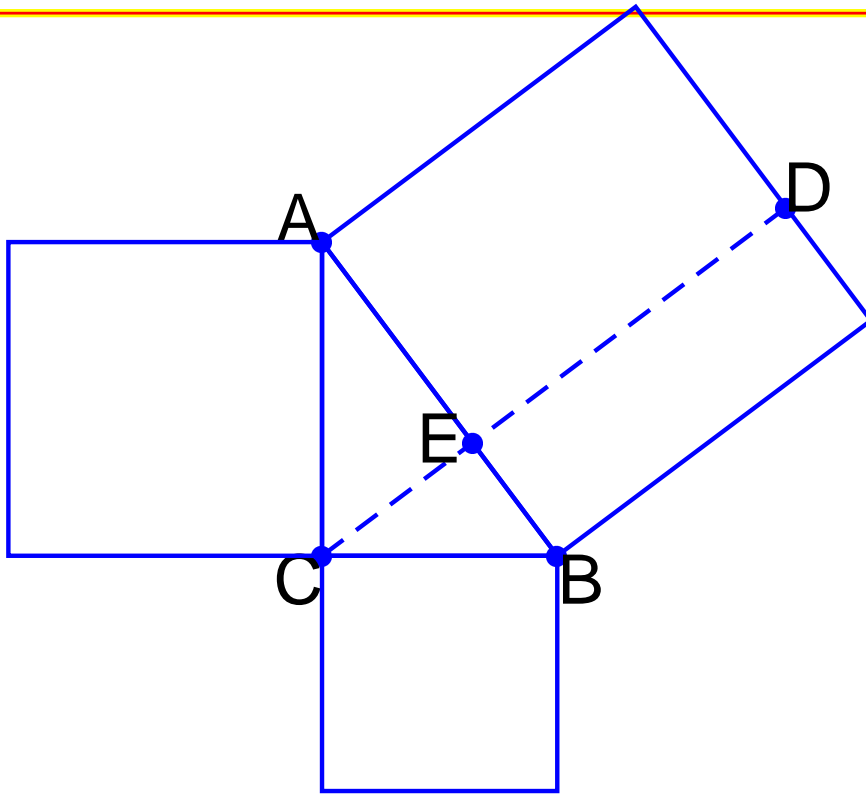
Draw a right triangle. Pythagoras Theorem states: $\overline{AB}^2 = \overline{BC}^2 + \overline{CA}^2$

PStrick example



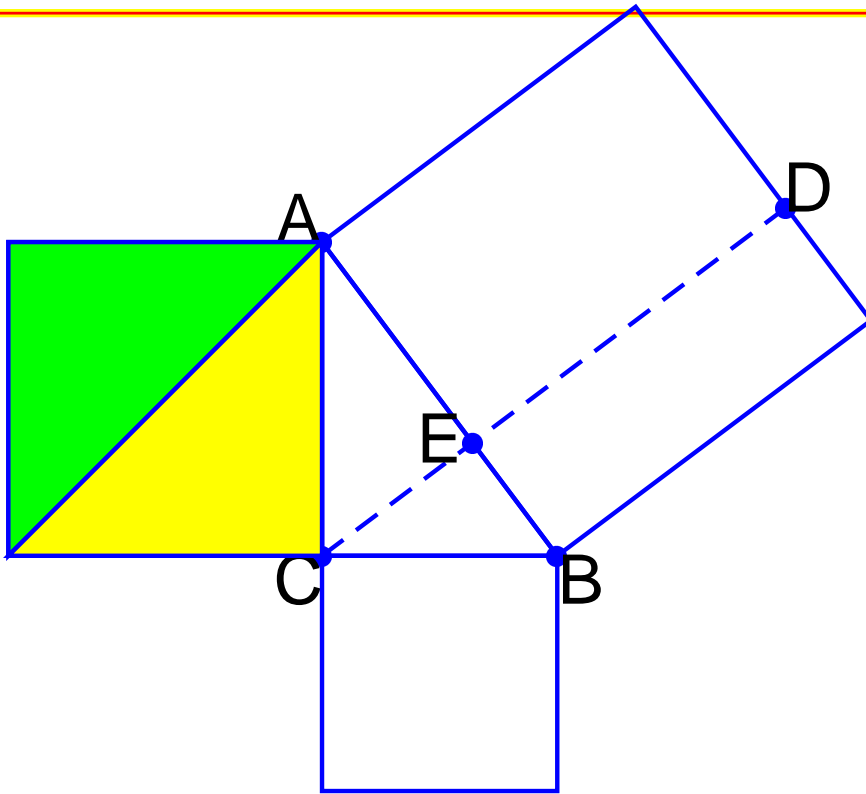
Draw the squares on each side

PStrick example



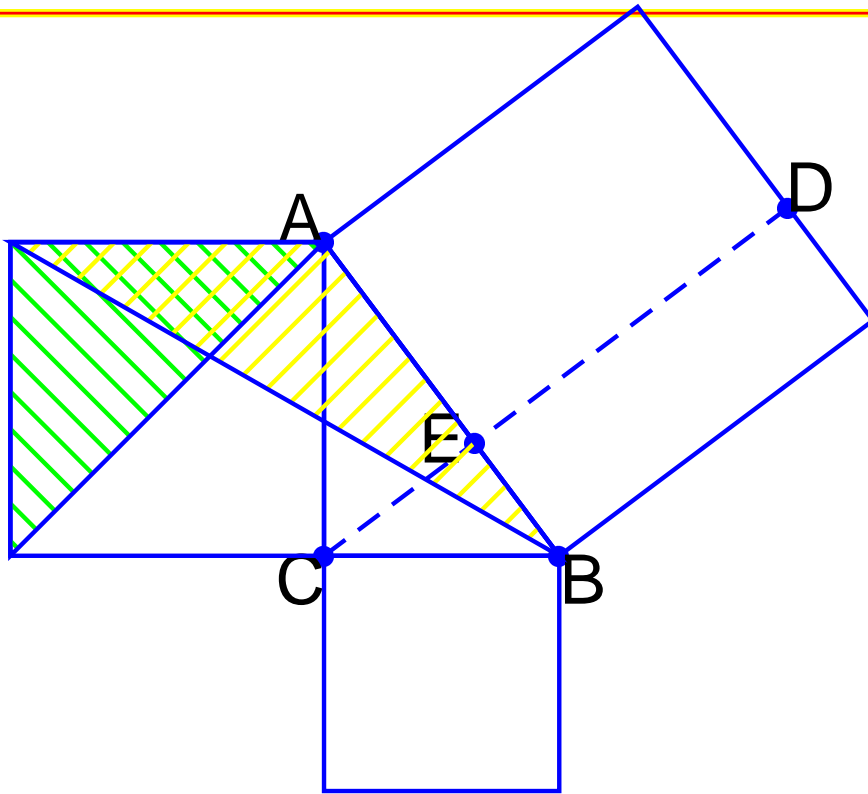
Drop a perpendicular

PStrick example



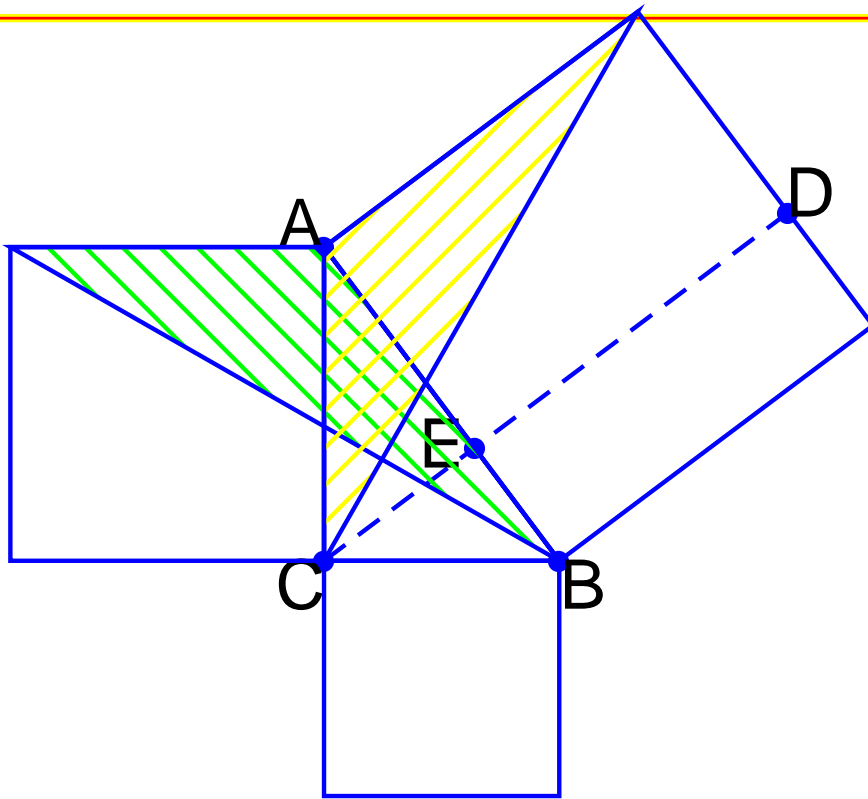
The green and yellow triangles have the same area

PStrick example



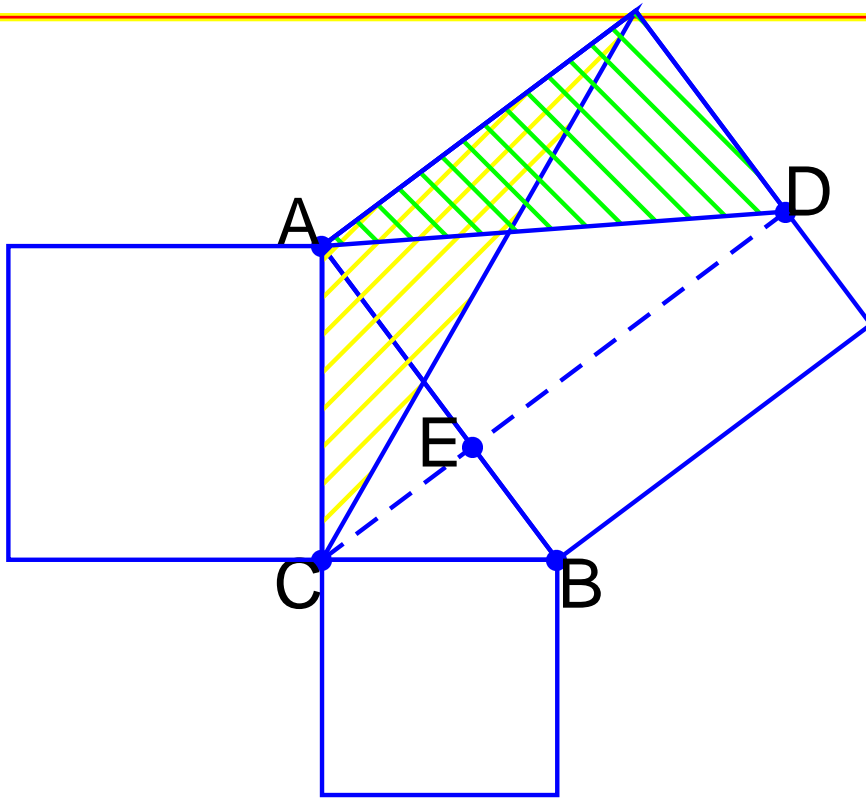
These two triangles have the same area

PStrick example



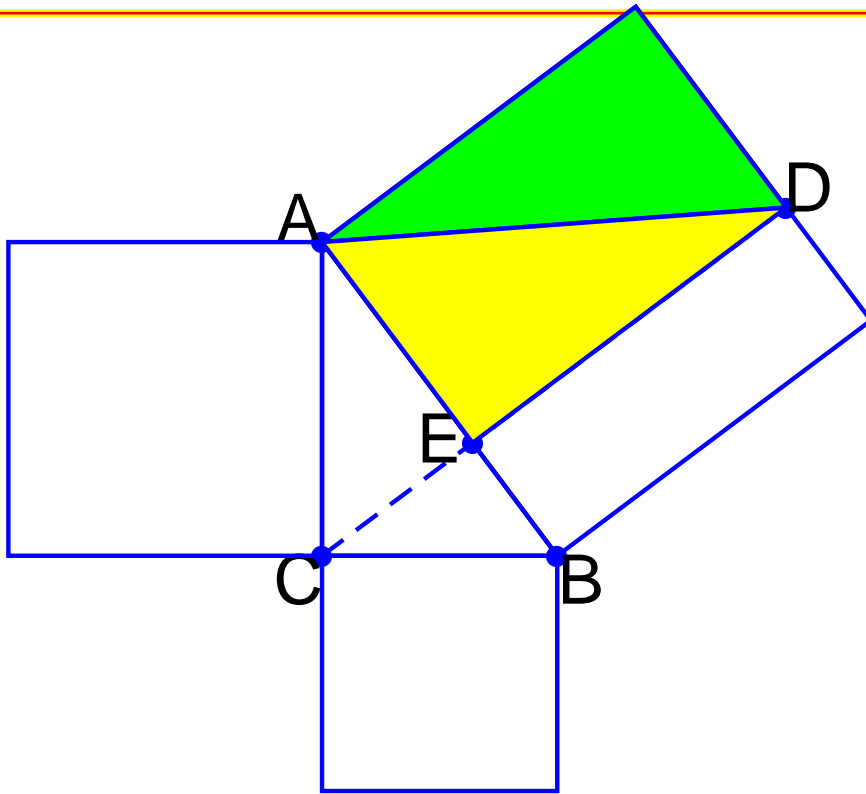
Rotate green \triangle to yellow \triangle

PStrick example



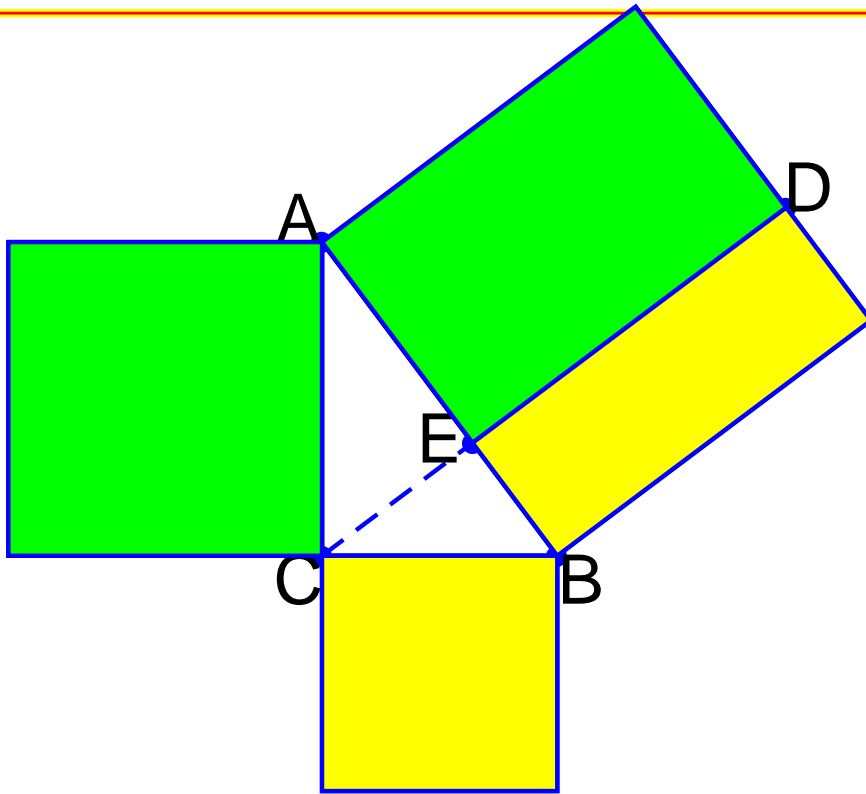
The green and yellow triangles have the same area

PStrick example



The green and yellow triangles have the same area

PStrick example



By symmetry we have shown that the like-colored regions have the same area