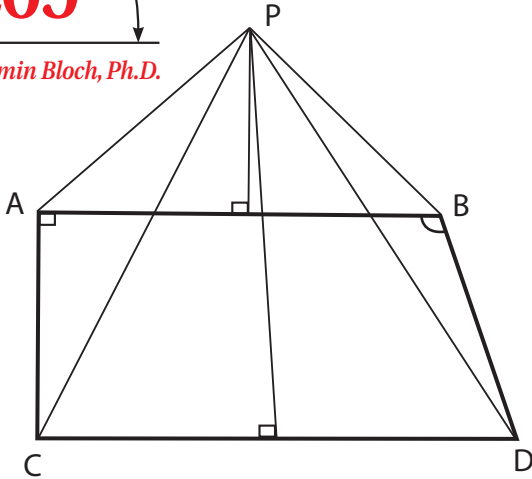


Problem
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by Benjamin Bloch, Ph.D.



In this two-dimensional diagram:

AC is perpendicular to AB.

BD is equal to AC at an angle greater than 90 degrees from AB.

Point P is the intersection of the perpendicular bisectors to line segments AB and CD.

Therefore $PA = PB$ and $PC = PD$

Triangles PCA and PDB are congruent; SSS = SSS

Since angles PAC and PBD are corresponding angles of congruent triangles, they must be equal.

Angles PAB and PBA are equal (base angles of a perpendicular bisector are equal).

Since equals subtracted from equals are also equal, right angle BAC must equal to angle ABD (which is greater than 90 degrees).

Does this prove that some right angles can be greater than 90 degrees?