4.3.2 Turning a *CO* into a C with a diameter as a diagonal

We know that, for an *O*, $a^2 + c^2 = b^2 + d^2$.
If we reflect the segment to one side of a diagonal in its perpendicular bisector, opposite sides become adjacent and we have a quadrilateral comprising two right triangles joined by the hypotenuse. This produces a *C* where one diagonal is a diameter of the circumscribed circle.