**Why does it make sense that knowing the diagonals of a quadrilateral are perpendicular is not enough to prove that the quadrilateral is a rhombus?**

**Answer: knowing that the diagonals are perpendicular is not enough to prove that a quadrilateral is a rhombus b/c there are other shapes – like square and kites, that also have perpendicular diagonals .**

**Explain using diagonals why a square is both a rhombus and a rectangle.**

**Answer: A rhombus has diagonals that are perpendicular and bisecting each other – as does a square (so a square is a rhombus). A rectangle has diagonals that are congruent and bisect each other – since a square does too, it is a rectangle.**

**Explain using diagonals why a square is always a rhombus but a rhombus is not always a square.**

**Answer: A square has diagonals that are congruent perpendicular bisectors. Whereas, A rhombus has diagonals that are perpendicular bisectors but are not congruent. Thus, the diagonals of a square fulfil the requirements for the diagonals of a rhombus: perpendicular bisectors, but the diagonals of a rhombus do not fulfil one of the requirements for the diagonals of a square: congruency.**