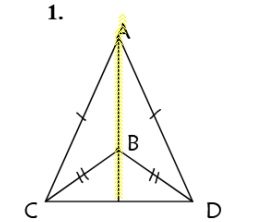
4.4 Perpendicular Bisector Theorems!

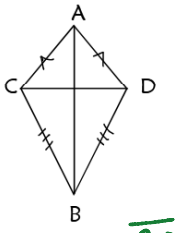
In the following diagrams, determine which segment is the perpendicular bisector of the other segment.

1.



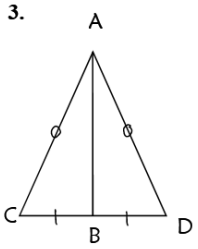
$\overleftrightarrow{AB} \perp$ bis $\overline{CD}$

2.



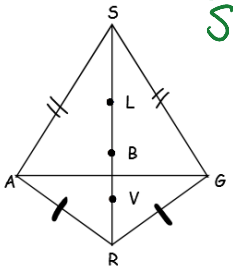
$\overline{AB} \perp$ bis $\overline{CD}$

3.



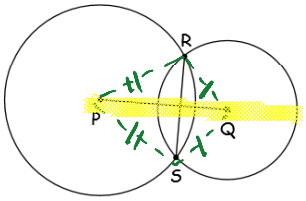
$\overline{AB} \perp$ bis $\overline{CD}$

4.



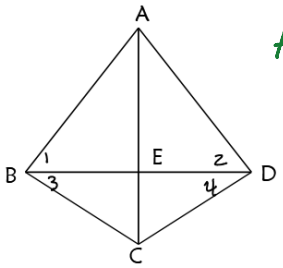
$\overline{SR} \perp$ bis $\overline{AG}$

5. Given: Circles P and Q



$\overline{PQ} \perp$ bis $\overline{RS}$

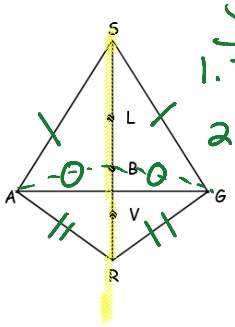
6. Given: $\angle 1 \cong \angle 2$
$\angle 3 \cong \angle 4$



$\overline{AC} \perp$ bis $\overline{BD}$

7. Given: $\overline{AS} \cong \overline{SG}, \overline{AR} \cong \overline{RG}$

Prove: $\overline{AB} \cong \overline{BG}$



Statements	Reasons
1. $\overline{AS} \cong \overline{SG}, \overline{AR} \cong \overline{RG}$	1. Given
2. $\overline{SR} \perp$ bis $\overline{AG}$	2. If 2 pts are equidistant from the endpts of a segment, then they form the $\perp$ bis of the segment.
3. Draw in $\overline{AB}, \overline{BG}$	3. 2 pts determine a line
4. $\overline{AB} \cong \overline{BG}$	4. If a point lies on the $\perp$ bis, then it is equidistant from the endpts of the segment.

8. Given: $\odot M$, T is the midpoint of $\overline{AH}$

Prove: $\overline{MT} \perp \overline{AH}$