

# Triangle Bisector Theorems 5.2



## Overview of Problems

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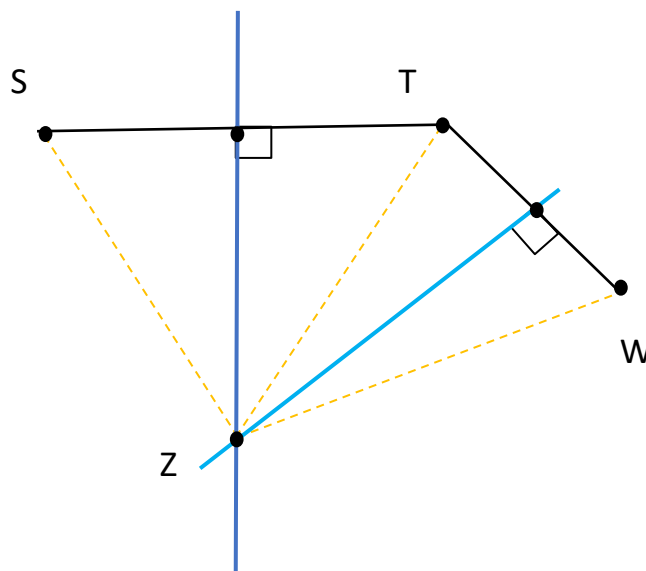
### Example Set: A

Verify the theorem:

1. Draw a line segment.
2. Next draw the perpendicular bisector through the segment.
3. Plot a point on the perpendicular bisector.
4. Verify (by measuring) the theorem that if a point lies on the perpendicular bisector of a segment, then the point is equidistant from the endpoints of the segment.

### Example Set: B

1. Given: Z is on the perpendicular bisector of both  $\overline{ST}$  and  $\overline{TW}$   
Prove:  $SZ = WZ$



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## *Overview of Problems*

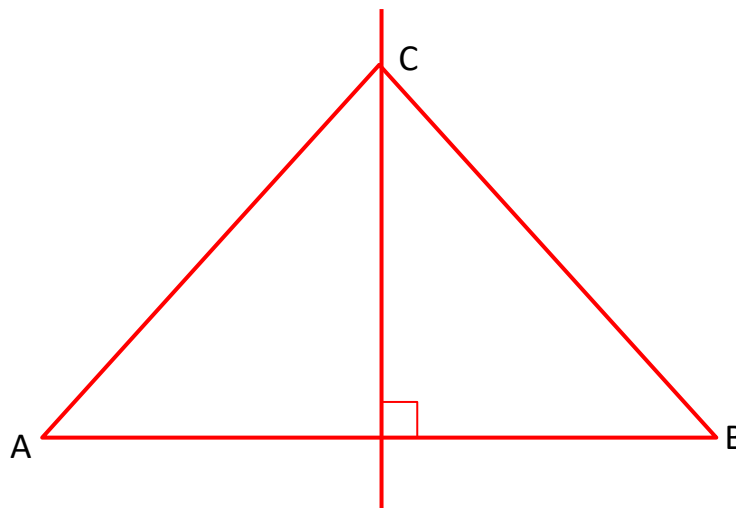
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### *Example Set: A -ANSWER KEY*

**Verify the theorem:**

1. Draw a line segment.
2. Next draw the perpendicular bisector through the segment.
3. Plot a point on the perpendicular bisector.
4. Verify (by measuring) the theorem that if a point lies on the perpendicular bisector of a segment, then the point is equidistant from the endpoints of the segment.



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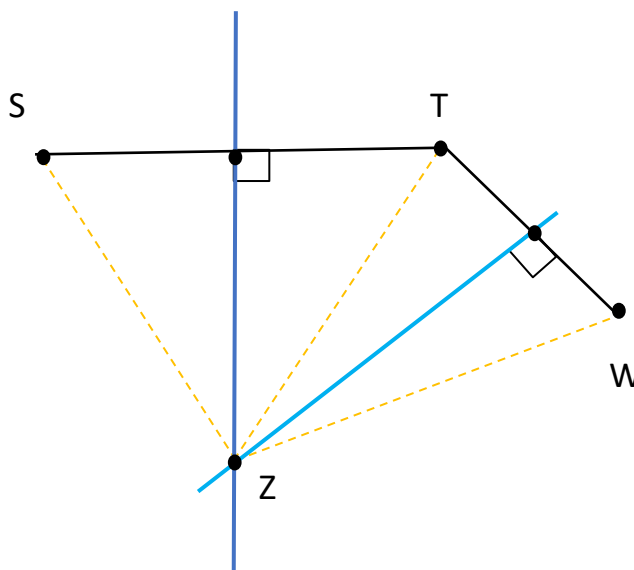


## Overview of Problems



### Example Set: B- ANSWER KEY

1. Given: Z is on the perpendicular  
Bisector of both  $\overline{ST}$  and  $\overline{TW}$   
Prove:  $SZ = WZ$



Statement	Reason
$z$ is on the $\perp$ bisec of $\overline{ST}$ , $\overline{TW}$	Given
$SZ = ZT$ $ZT = WZ$	If a point is on the $\perp$ bisector then it's equidistant from the endpoints.
$SZ = WZ$	Trans. Prop.