

5.2 Perpendicular Bisectors

Answers

1. $x = 5$
2. $x = \frac{1}{2}$
3. $x = 31^\circ$
4. $x = 34$
5. $AE = EB, AD = DB$
6. No, because $AC \neq CB$
7. Yes, because $AD = DB$
8. No, we don't know if T is the midpoint of \overline{XY} or if \overleftrightarrow{ST} passes through the vertex at the top of the triangle.
9. Equilateral Triangle
- 10.

<i>Statement</i>	<i>Reason</i>
1. \overleftrightarrow{CD} is the perpendicular bisector of \overline{AB}	Given
2. D is the midpoint of \overline{AB}	Definition of a perpendicular bisector
3. $\overline{AD} \cong \overline{DB}$	Definition of a midpoint
4. $\angle CDA$ and $\angle CDB$ are right angles	Definition of a perpendicular bisector
5. $\angle CDA \cong \angle CDB$	Definition of right angles
6. $\overline{CD} \cong \overline{CD}$	Reflexive PoC
7. $\triangle CDA \cong \triangle CDB$	SAS
8. $\overline{AC} \cong \overline{CB}$	CPCTC