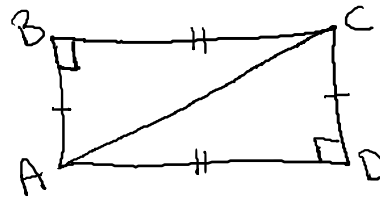
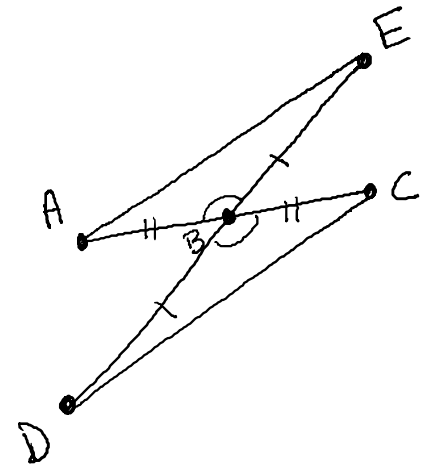


Section 3.2 Proofs:

12. \overline{ABC} and \overline{DBE} bisect each other. Prove that $\triangle ABE \cong \triangle CBD$.

Statement	Reason
1. \overline{ABC} and \overline{DBE} bisect each other.	1. Given
2. B is the midpoint of \overline{AC} and \overline{DE}	2. Definition of segment bisector
3. $\overline{AB} \cong \overline{CB}$ $\overline{DB} \cong \overline{EB}$	3. Definition of midpoint
4. $\angle ABE \cong \angle CBD$	4. Vertical angles are congruent
5. $\triangle ABE \cong \triangle CBD$	5. SAS \cong (steps 3, 4)



13. $ABCD$ is a quadrilateral; $AB = CD$; $BC = DA$; and $\angle DAB$, $\angle ABC$, $\angle BCD$, and $\angle CDA$ are right angles. Prove that the diagonal \overline{AC} separates the quadrilateral into two congruent triangles.

Statement	Reason
1. $AB = CD$	1. Given
2. $\overline{AB} \cong \overline{CD}$	2. Definition of congruent segment
3. $\angle ABC$ and $\angle CDA$ are right angles	3. Given
4. $\angle ABC \cong \angle CDA$	4. If two angles are right angles, then they are congruent.
5. $BC = DA$	5. Given
6. $\overline{BC} \cong \overline{DA}$	6. Definition of congruent segments
7. $\triangle ABC \cong \triangle CDA$	SAS \cong (steps 2, 4, 6)