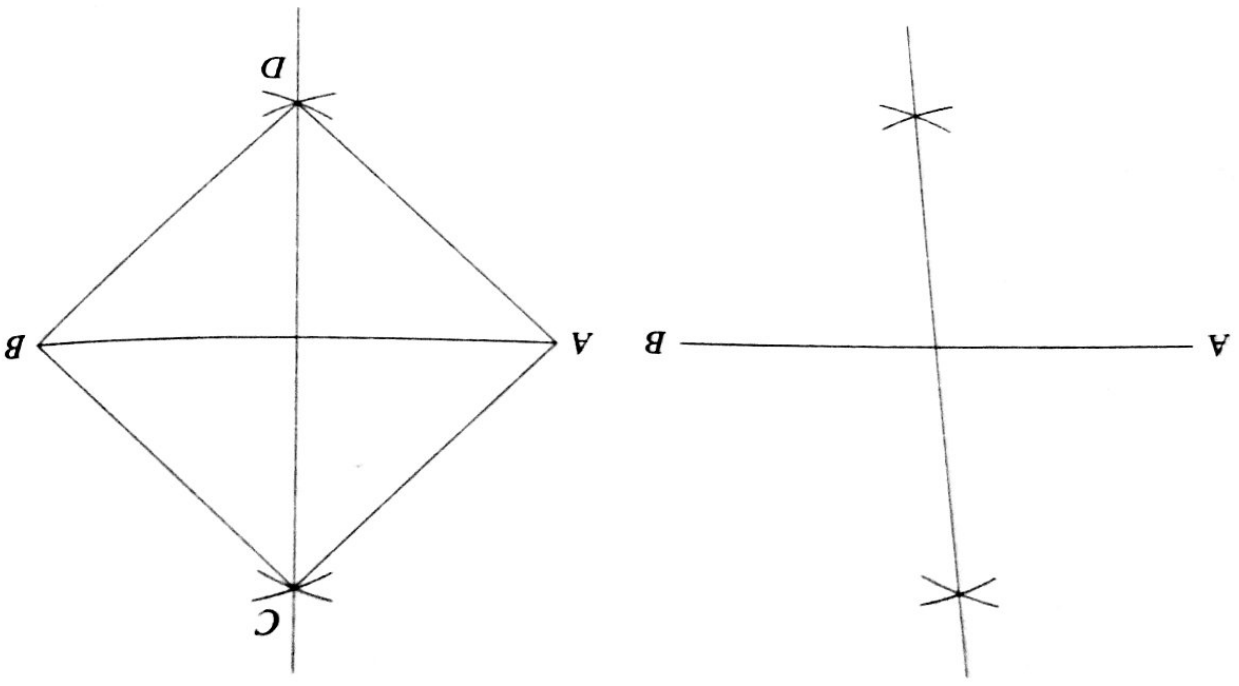


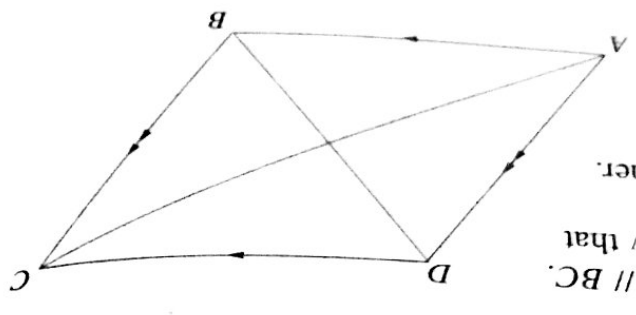
The figure on the left shows Robert's construction of the bisector of a given angle A, using ruler and compasses only.
 (a) Describe briefly Robert's construction.
 (b) Explain why Robert's construction is correct by using the triangles in the figure on the right.

2.

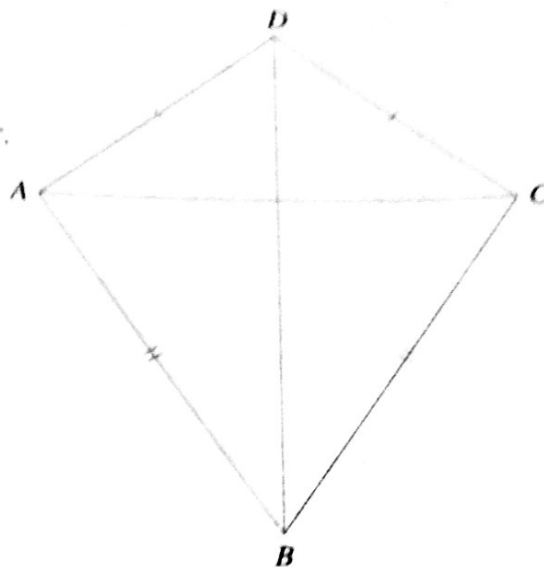


The figure on the left shows how the perpendicular bisector of AB is drawn, using ruler and compasses only.
 (a) Describe briefly the construction.
 (b) Prove that the construction is correct by using the figure on the right.

3. In the figure, $AB \parallel DC$ and $AD \parallel BC$.
 Use congruent triangles to show that
 (a) $AB = DC$,
 (b) AC and BD bisect each other.

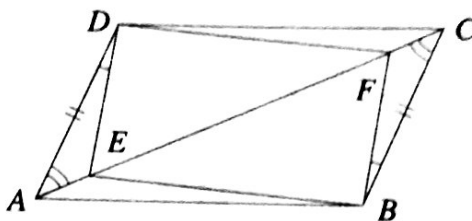


4. In the figure, $AD = CD$ and $AB = CB$.
Use congruent triangles to show that
- BD bisects \widehat{ADC} ,
 - AC and DB are perpendicular to each other.

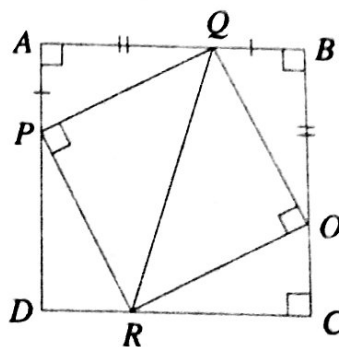


5. A rectangle is a special parallelogram with four right angles. Use congruent triangles to show that its diagonals are equal.

6. (a) Is $\triangle ADE$ congruent to $\triangle CBF$? Give reason.
(b) Explain why
- $\triangle DEF \cong \triangle BFE$,
 - $\triangle ABE \cong \triangle CDF$.



7. (a) Is $\triangle PAQ$ congruent to $\triangle QBO$? Give reason.
(b) Show that
- $\triangle PQR \cong \triangle ORQ$,
 - $\triangle PDR \cong \triangle RCO$.



8. In the figure, $DE \parallel BC$ and $AD = AE$. Show that
- $BD = CE$,
 - $BE = CD$.

