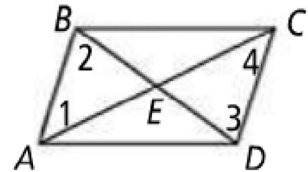


p.364

13. **Developing Proof** Complete this two-column proof of Theorem 6-6.

Given: $\square ABCD$

Prove: \overline{AC} and \overline{BD} bisect each other at E .



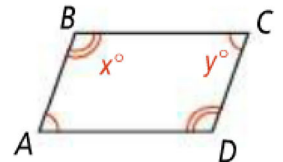
| Statements | Reasons |
|--|---------------------------|
| 1) $ABCD$ is a parallelogram. | 1) Given |
| 2) $\overline{AB} \parallel \overline{DC}$ | 2) a. <u>?</u> |
| 3) $\angle 1 \cong \angle 4$; $\angle 2 \cong \angle 3$ | 3) b. <u>?</u> |
| 4) $\overline{AB} \cong \overline{DC}$ | 4) c. <u>?</u> |
| 5) d. <u>?</u> | 5) ASA |
| 6) $\overline{AE} \cong \overline{CE}$; $\overline{BE} \cong \overline{DE}$ | 6) e. <u>?</u> |
| 7) f. <u>?</u> | 7) Definition of bisector |

p. 373

18. **Developing Proof** Complete this two-column proof of Theorem 6-10.

Given: $\angle A \cong \angle C$, $\angle B \cong \angle D$

Prove: $ABCD$ is a parallelogram.



| Statements | Reasons |
|---|---|
| 1) $x + y + x + y = 360$ | 1) The sum of the measures of the angles of a quadrilateral is 360. |
| 2) $2(x + y) = 360$ | 2) a. <u>?</u> |
| 3) $x + y = 180$ | 3) b. <u>?</u> |
| 4) $\angle A$ and $\angle B$ are supplementary. $\angle A$ and $\angle D$ are supplementary. | 4) Definition of supplementary |
| 5) c. <u>?</u> \parallel <u>?</u> , <u>?</u> \parallel <u>?</u> | 5) d. <u>?</u> |
| 6) $ABCD$ is a parallelogram. | 6) e. <u>?</u> |