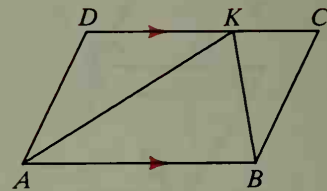


17. Given: $\overline{AB} \parallel \overline{CD}$; $m\angle D = 116$;

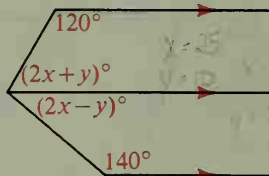
\overrightarrow{AK} bisects $\angle DAB$.

- Find the measures of $\angle DAB$, $\angle KAB$, and $\angle DKA$.
- Is there enough information for you to conclude that $\angle D$ and $\angle C$ are supplementary, or is more information needed?

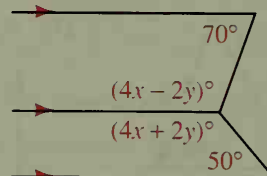


Find the values of x and y .

- 18.



- 19.



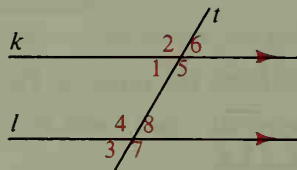
Write proofs in two-column form.

20. Given: $k \parallel l$

Prove: $\angle 2 \cong \angle 7$

21. Given: $k \parallel l$

Prove: $\angle 1$ is supplementary to $\angle 7$.



22. Copy what is shown for Theorem 3-3 on page 79. Then write a proof in two-column form.

23. Draw a four-sided figure $ABCD$ with $\overline{AB} \parallel \overline{DC}$ and $\overline{AD} \parallel \overline{BC}$.

- Prove that $\angle A \cong \angle C$.
- Is $\angle B \cong \angle D$?

- C 24. Given: $\overline{AS} \parallel \overline{BT}$;

$$m\angle 4 = m\angle 5$$

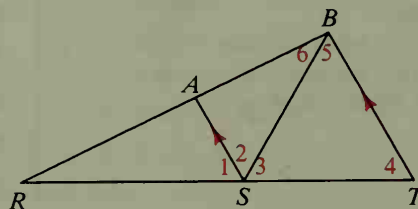
Prove: \overrightarrow{SA} bisects $\angle BSR$.

25. Given: $\overline{AS} \parallel \overline{BT}$;

$$m\angle 4 = m\angle 5;$$

\overrightarrow{SB} bisects $\angle AST$.

Find the measure of $\angle 1$.



Mixed Review Exercises

For each statement (a) tell whether the statement is true or false, (b) write the converse, and (c) tell whether the converse is true or false.

- If two lines are perpendicular, then they form congruent adjacent angles.
- If two lines are parallel, then they are not skew.
- Two angles are supplementary if the sum of their measures is 180.
- Two planes are parallel only if they do not intersect.