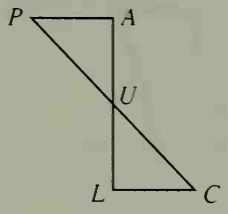
Cumulative Review: Chapters 1–6

A

1. An angle and its complement have the measures $x + 38$ and $2x - 5$. Find the measure of the angle.

2. Find the sum of the measures of the interior angles of a pentagon.

3. Can the given information be used to prove the triangles congruent? If so, which congruence postulate or theorem would you use?



a. Given: $\overline{PC}$ and $\overline{AL}$ bisect each other.

b. Given: $\angle P \cong \angle C$; U is the midpoint of $\overline{PC}$.

c. Given: $\overline{PA} \parallel \overline{LC}$

d. Given: $\overline{PA} \perp \overline{AL}$; $\overline{LC} \perp \overline{AL}$; $\overline{PU} \cong \overline{UC}$

4. Tell whether the statement is *always*, *sometimes*, or *never* true for a parallelogram $ABCD$ with diagonals that intersect at P.

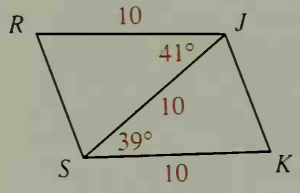
a. $AB = BC$ **b.** $\overline{AC} \perp \overline{BD}$ **c.** $\angle A$ and $\angle B$ are complementary $\measuredangle$s.

d. $\angle ADB \cong \angle CBD$ **e.** $\overline{AP} \cong \overline{PC}$ **f.** $\triangle ABC \cong \triangle CDA$

5. In $\triangle XYZ$, $m\angle X = 64$ and $m\angle Y = 54$. Name **(a)** the longest and **(b)** the shortest side of $\triangle XYZ$.

6. a. Which segment is longer: $\overline{RS}$ or $\overline{JK}$?

b. Name the theorem that supports your answer.



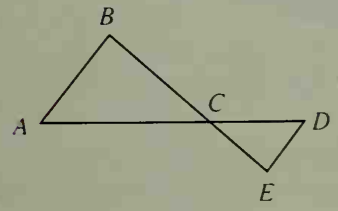
B

7. The difference between the measures of two supplementary angles is 38. Find the measure of each angle.

8. The lengths of the sides of a triangle are z, $z + 3$, and $z + 6$. What can you conclude about the value of z?

9. Write an indirect proof of the following statement: If $PQRS$ is a quadrilateral, then $\angle Q$, $\angle R$, and $\angle S$ are not all 120°.

10. Given: $m\angle B > m\angle A$;
$m\angle E > m\angle D$
Prove: $AD > BE$



11. Given: $\overline{DC} \parallel \overline{AB}$; $\overline{CE} \perp \overline{AB}$; $\overline{AF} \perp \overline{AB}$
Prove: $AECF$ is a rectangle.