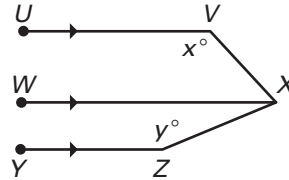


Challenge: Skills and Applications

For use with pages 150–156

1. If \overline{UV} , \overline{WX} , and \overline{YZ} are all parallel, find the measure of each angle in terms of x and y .

a. $\angle VXW$ b. $\angle WXZ$ c. $\angle VXZ$

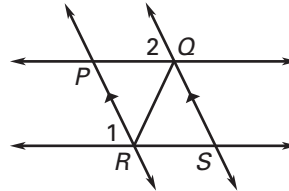


2. a. Explain why $\angle 1$ and $\angle 2$ are not corresponding angles with respect to any pair of lines and transversal.
b. Write a two-column proof.

GIVEN: $\overleftrightarrow{PR} \parallel \overleftrightarrow{QS}$, $\angle 1 \cong \angle 2$

PROVE: $\overleftrightarrow{PQ} \parallel \overleftrightarrow{RS}$

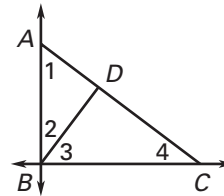
(Hint: Use $\angle QPR$ or $\angle QSR$.)



3. Write a two-column proof.

GIVEN: $\angle 1$ and $\angle 3$ are supplementary.

PROVE: $j \parallel k$



4. Write a paragraph proof.

GIVEN: \overrightarrow{CB} bisects $\angle ACE$,

\overrightarrow{JF} bisects $\angle AJH$, $\overline{DE} \parallel \overline{GH}$.

PROVE: $\overrightarrow{CB} \parallel \overrightarrow{JF}$

