✔ **Talk About It**
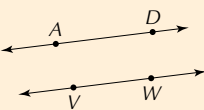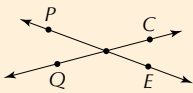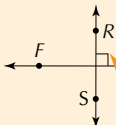
No; $\overrightarrow{KJ}$ **indicates that K is the endpoint, but** $\overrightarrow{JK}$ **indicates that J is the endpoint.**

1. Do you think that $\overrightarrow{KJ}$ names the same ray as $\overrightarrow{JK}$? Explain.
See above.

2. Look at the photo of the bridge on page 328. What geometric figures are suggested by the straight parts of the framework? What geometric figure is somewhat like the flat surface of the water?
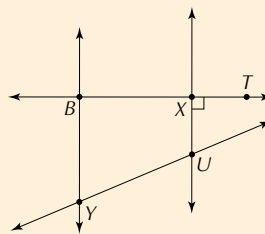**Line segments; Plane**

What are some special lines?

Some lines are given special names depending on their relationship with other lines. These terms can also be applied to line segments and rays.

	What You **Draw**	What You **Say**	What You **Write**
Parallel lines never cross and stay the same distance apart.		"Line AD is parallel to line VW."	$\overleftrightarrow{AD} \parallel \overleftrightarrow{VW}$
Intersecting lines pass through the same point.		"Line PE intersects line QC."	$\overleftrightarrow{PE}$ intersects $\overleftrightarrow{QC}$.
Perpendicular lines are intersecting lines that form square corners.	This symbol tells you that this is a square corner, or right angle.	"Line RS is perpendicular to line FH."	$\overleftrightarrow{RS} \perp \overleftrightarrow{FH}$

Example

In the diagram at the right, identify a pair of parallel lines, a pair of intersecting line segments, and a pair of perpendicular rays.

parallel lines $\overleftrightarrow{BY} \parallel \overleftrightarrow{XU}$

intersecting line segments $\overline{BY}$ intersects $\overline{YU}$.

perpendicular rays $\overrightarrow{XU} \perp \overrightarrow{XT}$

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3. Sample intersecting rays: $\overrightarrow{XB}$ **intersects** $\overrightarrow{XU}$; $\overline{BY} \parallel \overline{XU}$; $\overrightarrow{BT} \perp \overrightarrow{XU}$

3. In the example, name a pair of intersecting rays. Name a pair of parallel line segments. Name a pair of perpendicular lines. **If BX and YU are extended, they will intersect at a point to the right of T.**
See above.

4. Intersecting;

4. Reasoning Are $\overleftrightarrow{BX}$ and $\overleftrightarrow{YU}$ parallel or intersecting? Explain.
See above right.

5. Reasoning Are all perpendicular lines also intersecting? Are all intersecting lines also perpendicular? Explain.
See margin.

Take It to the NET
More Examples
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