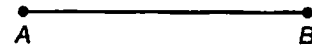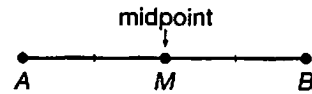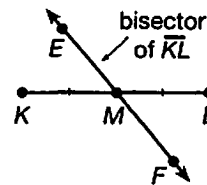# SKILL 3: Midpoints and Bisectors

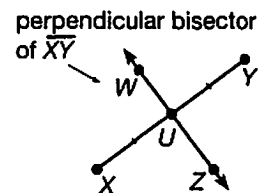A **line segment** is formed by two endpoints and all the points between them.

The **midpoint** of a segment divides it into two **congruent** segments. Congruent segments have equal lengths. M is the midpoint of $\overline{AB}$. $\overline{AM} \cong \overline{MB}$

$\overline{EF}$ is the **bisector** of $\overline{KL}$. The two marks on $\overline{KL}$ show equal parts. $\overline{KM} \cong \overline{ML}$
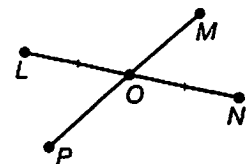
The midpoint of $\overline{XY}$ is U, and $\overline{WZ}$ is perpendicular to $\overline{XY}$ at U. So $\overleftrightarrow{WZ}$ is the **perpendicular bisector** of $\overline{XY}$.

Example

> **Use the figure to name a line segment, two congruent segments, a midpoint, and a bisector.**
>
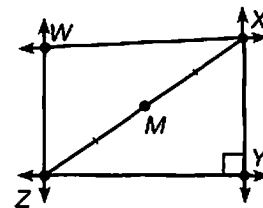> The two endpoints L and N form the line segment $\overline{LN}$. The tick marks show that $\overline{LO} \cong \overline{ON}$. So, O is the midpoint of $\overline{LN}$. $\overline{MP}$ is a bisector of $\overline{LN}$.

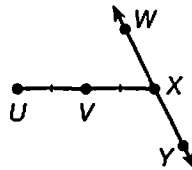## Guided Practice

Use the figure to name each of the following.

1. a line segment _____

2. a midpoint _____

3. two congruent segments _____

SKILL 3: Practice

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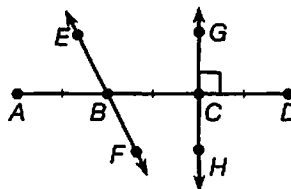**Use the figure to name each of the following:**

1. a midpoint _____

2. a line segment _____
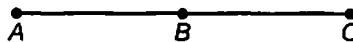
3. a pair of congruent segments _____

4. a bisector _____

Use the figure to name each of the following:

5. a bisector that is not perpendicular _____

6. a perpendicular bisector _____

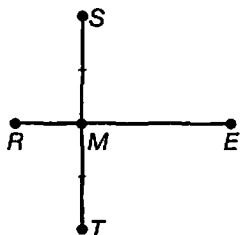7. a pair of congruent segments _____

8. a midpoint _____

B is the midpoint of $\overline{AC}$. Tell whether each statement is *true* or *false*.

9. $\overline{AB} \cong \overline{BC}$ _____

10. $\overline{AC}$ is a bisector. _____

11. If $\overline{BC}$ measures 4 cm, the measure of $\overline{AB}$ is 4 cm. _____

TEST PREP
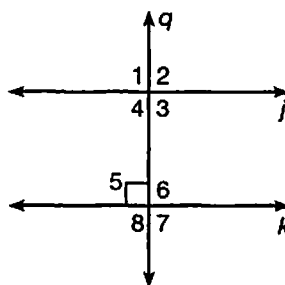
12. Point M is the midpoint of which segment?

    Skill 3

A $\overline{RM}$	C $\overline{RE}$
B $\overline{SM}$	D $\overline{ST}$

13. Lines j and k are parallel, and line q is perpendicular to line k. What is the measure of $\angle 3$?

    Skill 2

F 90°	H 270°
G 180°	J 360°