Name: _____

Geometry

6.1 Perpendicular and Angle Bisectors

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Perpendicular Bisector

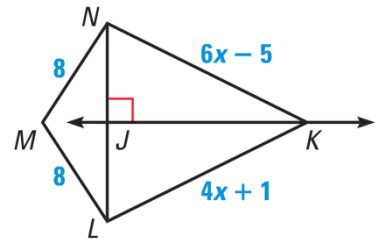- Segment that is _____ to and _____ a _____

Perpendicular Bisector Theorem
If a point is on the _____ of a segment, then it is _____ from the _____ of the segment

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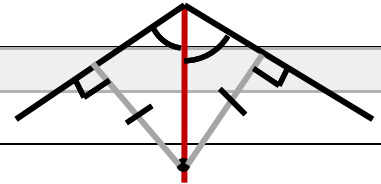| **Converse of the Perpendicular Bisector Theorem** |
|---|
| If a point is _____ from the _____ of a segment, then it is on the _____ of the segment |

In the diagram, $\overline{JK}$ is the perpendicular bisector of $\overline{NL}$.
Find NK.

Explain why M is on $\overleftrightarrow{JK}$.

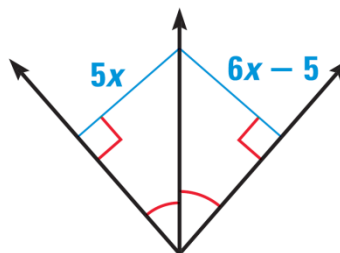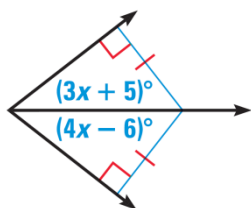| **Angle Bisector** |
|---|

Ray that _____ an _____

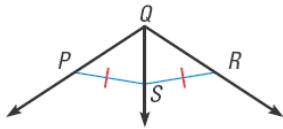| **Angle Bisector Theorem** |
|---|
| If a _____ is on the _____, then it is _____ from the _____ of the angle |

Converse of the Angle Bisector Theorem
If a _____ is _____ from the _____ of an angle, then it is on the _____

Find the value of x.

$(3x + 5)°$
$(4x − 6)°$

$5x$ $6x − 5$

Do you have enough information to conclude that $\overrightarrow{QS}$ bisects ∠PQR?

Write Equations of Perpendicular Bisectors

1. Find _____
2. Find _____
3. Find _____ slope
4. Write _____ using _____ from #3 and _____ from #1

Write the perpendicular bisector of a segment with endpoints $D(5, -1)$ and $E(-11, 3)$

Assignment: 296 #2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 38, 40, 43 = 15 total