

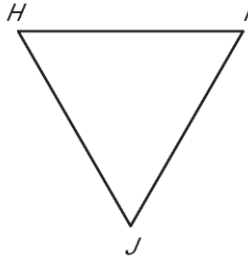
Name _____

Date _____

Assignment 14 LESSON 2.6

In Exercises 1 and 2, complete the proof.

1. **GIVEN:** $\overline{HI} = 9$, $\overline{IJ} = 9$, $\overline{IJ} \cong \overline{JH}$
PROVE: $\overline{HI} \cong \overline{JH}$

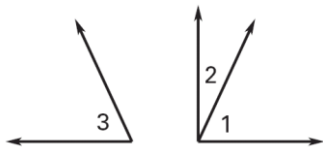


Statements	Reasons
1. $\overline{HI} = 9$	1. <u>?</u>
2. $\overline{IJ} = 9$	2. <u>?</u>
3. $\overline{HI} = \overline{IJ}$	3. <u>?</u>
4. <u>?</u>	4. Definition of congruent segments
5. $\overline{IJ} \cong \overline{JH}$	5. <u>?</u>
6. $\overline{HI} \cong \overline{JH}$	6. <u>?</u>

2. **GIVEN:** $\angle 3$ and $\angle 2$ are complementary.

$$m\angle 1 + m\angle 2 = 90^\circ$$

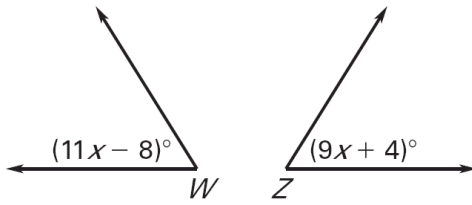
PROVE: $\angle 3 \cong \angle 1$



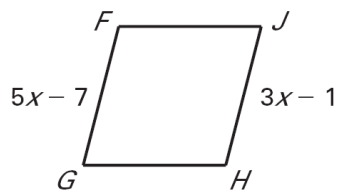
Statements	Reasons
1. $\angle 3$ and $\angle 2$ are complementary	1. <u>?</u>
2. $m\angle 1 + m\angle 2 = 90^\circ$	2. <u>?</u>
3. $m\angle 3 + m\angle 2 = 90^\circ$	3. <u>?</u>
4. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 2$	4. <u>?</u>
5. $m\angle 1 = m\angle 3$	5. <u>?</u>
6. $\angle 1 \cong \angle 3$	6. <u>?</u>

Solve for x using the given information. *Explain* your steps.

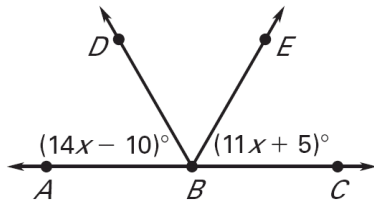
3. $\angle W \cong \angle Z$



4. $\overline{FG} \cong \overline{FJ}$, $\overline{FJ} \cong \overline{JH}$



5. $\angle ABD \cong \angle DBE$, $\angle EBC \cong \angle DBE$



6. $\overline{KP} \cong \overline{PN}$, $KP = 18$

