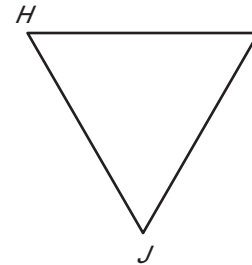


LESSON
2.6
Practice B
For use with pages 112–119
In Exercises 1–4, complete the proof.

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

PROVE: $\overline{HI} \cong \overline{JH}$

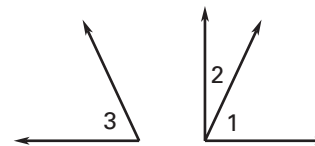
Statements	Reasons
1. $HI = 9$	1. ?
2. $IJ = 9$	2. ?
3. $HI = IJ$	3. ?
4. ?	4. Definition of congruent segments
5. $\overline{IJ} \cong \overline{JH}$	5. ?
6. $\overline{HI} \cong \overline{JH}$	6. ?



- 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. ?
2. $m\angle 1 + m\angle 2 = 90^\circ$	2. ?
3. $m\angle 3 + m\angle 2 = 90^\circ$	3. ?
4. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 2$	4. ?
5. $m\angle 1 = m\angle 3$	5. ?
6. $\angle 1 \cong \angle 3$	6. ?



- 3. GIVEN:**
- $AL = SK$

PROVE: $AS = LK$

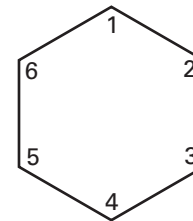
Statements	Reasons
1. $AL = SK$	1. ?
2. $LS = LS$	2. ?
3. $AL + LS = SK + LS$	3. ?
4. $AL + LS = AS$	4. ?
5. $SK + LS = LK$	5. ?
6. $AS = LK$	6. ?



LESSON 2.6 **Practice B** *continued*
For use with pages 112–119

4. **GIVEN:** $m\angle 4 = 120^\circ$, $\angle 2 \cong \angle 5$, $\angle 4 \cong \angle 5$

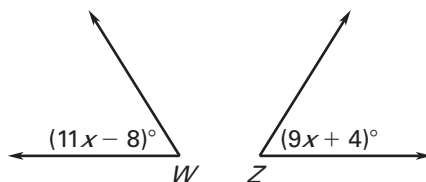
PROVE: $m\angle 2 = 120^\circ$



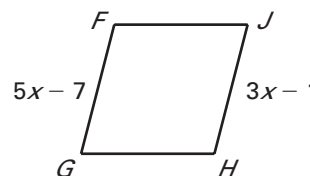
Statements	Reasons
1. $m\angle 4 = 120^\circ$, $\angle 2 \cong \angle 5$, $\angle 4 \cong \angle 5$	1. ?
2. $\angle 2 \cong \angle 4$	2. ?
3. ?	3. Definition of congruent angles
4. $m\angle 2 = 120^\circ$	4. ?

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

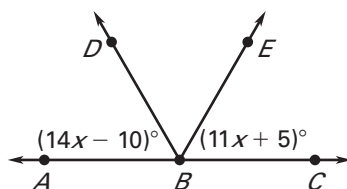
5. $\angle W \cong \angle Z$



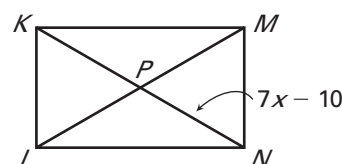
6. $\overline{FG} \cong \overline{FJ}$, $\overline{FJ} \cong \overline{JH}$



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



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



9. **Optical Illusion** To create the illusion at the right, a special grid was used. In the grid, corresponding row heights are the same measure. For instance, \overline{UV} and \overline{ZY} are congruent. You decide to make this design yourself. You draw the grid, but you need to make sure that the row heights are the same. You measure \overline{UV} , \overline{UW} , \overline{ZY} , and \overline{ZX} . You find that $\overline{UV} \cong \overline{ZY}$ and $\overline{UW} \cong \overline{ZX}$. Write an argument that allows you to conclude that $\overline{VW} \cong \overline{YX}$.

