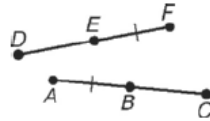


**LESSON**  
**2-6**

**Practice B**  
**Geometric Proof**

Write a justification for each step.

**Given:**  $AB = EF$ ,  $B$  is the midpoint of  $\overline{AC}$ ,  
and  $E$  is the midpoint of  $\overline{DF}$ .



1.  $B$  is the midpoint of  $\overline{AC}$ ,  
and  $E$  is the midpoint of  $\overline{DF}$ .

\_\_\_\_\_

2.  $\overline{AB} \cong \overline{BC}$ , and  $\overline{DE} \cong \overline{EF}$ .

\_\_\_\_\_

3.  $AB = BC$ , and  $DE = EF$ .

\_\_\_\_\_

4.  $AB + BC = AC$ , and  $DE + EF = DF$ .

\_\_\_\_\_

5.  $2AB = AC$ , and  $2EF = DF$ .

\_\_\_\_\_

6.  $AB = EF$

\_\_\_\_\_

7.  $2AB = 2EF$

\_\_\_\_\_

8.  $AC = DF$

\_\_\_\_\_

9.  $\overline{AC} \cong \overline{DF}$

\_\_\_\_\_

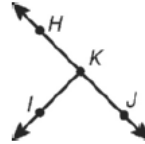
Fill in the blanks to complete the two-column proof.

10. **Given:**  $\angle HKJ$  is a straight angle.

$\overline{KI}$  bisects  $\angle HKJ$ .

**Prove:**  $\angle IKJ$  is a right angle.

**Proof:**



Statements	Reasons
1. a. _____	1. Given
2. $m\angle HKJ = 180^\circ$	2. b. _____
3. c. _____	3. Given
4. $\angle IKJ \cong \angle IKH$	4. Def. of $\angle$ bisector
5. $m\angle IKJ = m\angle IKH$	5. Def. of $\cong \angle$
6. d. _____	6. $\angle$ Add. Post.
7. $2m\angle IKJ = 180^\circ$	7. e. Subst. (Steps _____)
8. $m\angle IKJ = 90^\circ$	8. Div. Prop. of =
9. $\angle IKJ$ is a right angle.	9. f. _____

## Practice B

1. Given
2. Def. of mdpt.
3. Def. of  $\cong$  segments
4. Seg. Add. Post.
5. Subst.
6. Given
7. Mult. Prop. of =
8. Subst. Prop. of =
9. Def. of  $\cong$  segments

10.

Statements	Reasons
1. a. $\angle HKJ$ is a straight angle.	1. Given
2. $m\angle HKJ = 180^\circ$	2. b. Def. of straight $\angle$
3. c. $\overline{KI}$ bisects $\angle HKJ$	3. Given
4. $\angle IKJ \cong \angle IKH$	4. Def. of $\angle$ bisector
5. $m\angle IKJ = m\angle IKH$	5. Def. of $\cong \angle$ s
6. d. $m\angle IKJ + m\angle IKH = m\angle HKJ$	6. $\angle$ Add. Post.
7. $2m\angle IKJ = 180^\circ$	7. e. Subst. (Steps 2, 5, 6)
8. $m\angle IKJ = 90^\circ$	8. Div. Prop. of =
9. $\angle IKJ$ is a right angle.	9. f. Def. of right $\angle$