

# Chapter 2- Lesson 3

## The Game of Proof- Practice

1. Fill in the blank with a reason for each step.

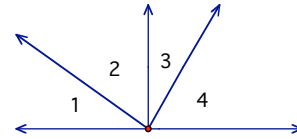
Given:  $\angle 1$  and  $\angle 2$  are complementary,  $\angle 1 \cong \angle 3$ ,  $\angle 2 \cong \angle 4$

Prove:  $\angle 3$  and  $\angle 4$  are complimentary.

Plan for proof: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Statement	Reason
1.	1. Given
2. $m\angle 1 + m\angle 2 = 90^\circ$	2.
3. $\angle 1 \cong \angle 3$ , $\angle 2 \cong \angle 4$	3.
4. $m\angle 1 = m\angle 3$ , $m\angle 2 = m\angle 4$	4.
5. $m\angle 3 + m\angle 2 = 90^\circ$	5.
6. $m\angle 3 + m\angle 4 = 90^\circ$	6.
7. $\angle 3$ and $\angle 4$ are complimentary.	7.

Name \_\_\_\_\_

Date \_\_\_\_\_

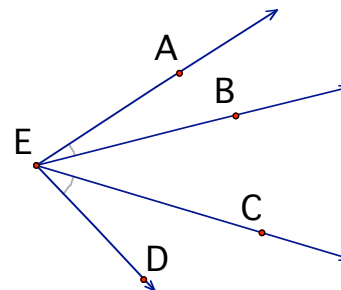
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2. Fill in the blank with a reason for each step.

Given:  $m\angle AEB = m\angle CED$

Prove:  $m\angle AEC = m\angle BED$ .

Plan for proof: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



Statement	Reason
1.	1. Given
2. $m\angle BEC = m\angle BEC$	2.
3. $m\angle AEB + m\angle BEC = m\angle CED + m\angle BEC$	3.
4. $m\angle AEC = m\angle AEB + m\angle BEC$	4.
5. $m\angle BED = m\angle CED + m\angle BEC$	5.
6. $m\angle AEC = m\angle BED$	6.

Name \_\_\_\_\_

Date \_\_\_\_\_

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3. Fill in the blank with a reason for each step.

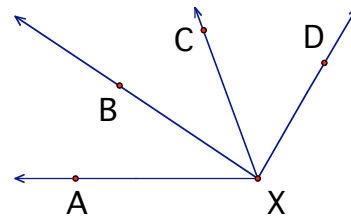
Given:  $\overline{XB}$  bisects  $\angle AXC$ ,  $\overline{XC}$  bisects  $\angle BXD$

Prove:  $m\angle AXC = m\angle BXD$

Plan for proof: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Statement	Reason
1.	1. Given
2. $m\angle AXB = m\angle BXC$	2.
3.	3. Given
4. $m\angle BXC = m\angle CXD$	4.
5. $m\angle AXB = m\angle CXD$	5.
6. $m\angle AXB + m\angle BXC = m\angle CXD + m\angle BXC$	6.
7. $m\angle AXB + m\angle BXC = m\angle AXC$	7.
8. $m\angle CXD + m\angle BXC = m\angle BXD$	8.
9. $m\angle AXC = m\angle BXD$	9.

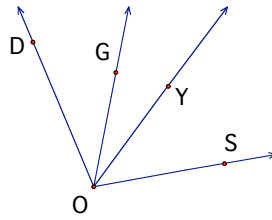
Name \_\_\_\_\_

Date \_\_\_\_\_

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4. Fill in the blank with a reason for each step.

Given:  $\angle DOY \cong \angle SOG$



Prove:  $\angle DOG \cong \angle SOY$

Plan for proof: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.

5. Copy the problem with the diagram onto another sheet of paper. Mark the diagram with the given information, write a plan for your proof, then write a two column proof.

Given:  $\overline{PX} \perp \overline{XR}$ ,  $\overline{QX} \perp \overline{XS}$

Prove:  $m\angle 1 = m\angle 3$

Plan for proof:

