

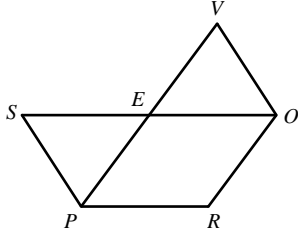
Complete a two-column proof.

1. Given: \overline{PV} and \overline{SO} intersect at E

$$\angle R \cong \angle PEO$$

Prove: $\angle R \cong \angle SEV$

Hint: Identify & use vertical angles

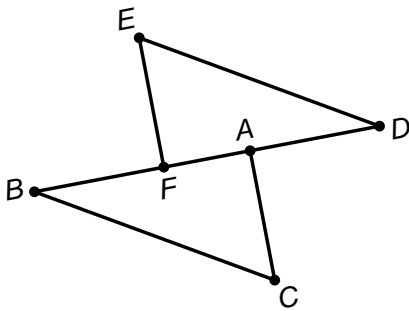


Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

2. Given: \overline{BFAD}

$$\angle DAC \cong \angle BAC$$

Prove: $\overline{CA} \perp \overline{BD}$



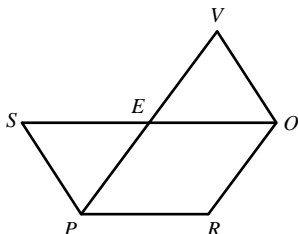
Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

3. Given: \overline{PV} bisects \overline{SO} at E

$$\overline{PR} \cong \overline{SE}$$

Prove: $\overline{PR} \cong \overline{EO}$

Hint: Use the "Rain-Bo" connection.

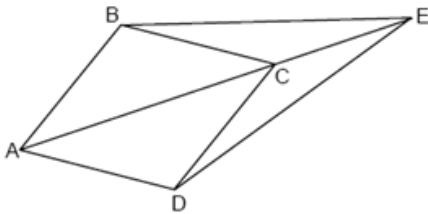


Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

4. Given: \overline{AE} bisects $\angle BCD$

Prove: $\angle BCE \cong \angle DCE$

Hint: Identify and use supplementary angles.



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Mixed Review:

Write the theorem:

5. Supplementary Angle Theorem: _____

6. Vertical Angle Theorem: _____

Determine if the statement is True or False:

7. Supplementary angles add to 180 and vertical angles are congruent.

8. Adjacent angles do not share a side or a segment bisector cuts through the midpoint of a segment.

Write a conditional statement that is Logically Equivalent to each given conditional:

9. If an angle is not acute, then it measure at least 90° .

10. If \overline{PQ} bisects $\angle APB$, then $\angle APQ \cong \angle BPQ$.