|  |  |
| --- | --- |
| **Statement** | **Reason** |
| 1. $\overline{BC}≅\overline{BF}$
 | 1. |
| 1. $\overline{CD}≅\overline{FD}$
 | 2. |
| 1. $\overline{BD}≅\overline{BD}$
 | 3. |
| 1. $∆BCD≅∆BFD$
 | 4. |

**Example 1:**

Given: $\overline{BC}≅\overline{BF}, \overline{CD}≅\overline{FD}$

Prove: $∆BCD≅∆BFD$



|  |  |
| --- | --- |
| **Statement** | **Reason** |
| 1. $ $ | 1. Given |
| 2.  | 2. Definition of segment bisector |
| 3.  | 3. Given |
| 4. $ $ | 4. Definition of segment bisector |
|  | 5. Vertical Angles Theorem |
|  | 6. SAS Postulate |

**Example 2:**

Given: $\overline{VZ} bisects \overline{XY}$;

$$\overline{XY} bisects \overline{VZ}$$

Prove: $∆XVW≅∆YZW$



|  |  |
| --- | --- |
| **Statement** | **Reason** |
| 1.  | 1. Given |
| 2.  | 2. |
| 3.  | 3. Given  |
| 4.  | 4. All right angles are congruent |
| 5.  | 5.  |

**Example 3:**

Given: $\overline{LM}≅\overline{PO}, ∠L≅∠P$

 $∠M and ∠O are right angles$

Prove: $∆LMN≅∆PON$



|  |  |
| --- | --- |
| **Statement** | **Reason** |
| 1. $ $ | 1.  |
| 2.  | 2.  |
| 3.  | 3.  |
| 4. $ $ | 4.  |
| 5.  | 5.  |

**Example 4:**

Given: $\overline{RP} bisects ∠SRQ, $

$$∠S≅∠Q$$

Prove: $∆SRP≅∆QRP$

