

Given: $\overline{GH} \perp \overline{HJ}$; $\overline{KJ} \perp \overline{HJ}$; $\overline{GJ} \cong \overline{KH}$

Proof # 15

Prove: $\overline{GH} \cong \overline{KJ}$

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| 1. $\overline{GH} \perp \overline{HJ}$; $\overline{KJ} \perp \overline{HJ}$ | 1. given |
| 2. $\triangle GHJ$ and $\triangle KJH$ are rt. \triangle s | 2. Def. \perp lines |
| 3. $\overline{GJ} \cong \overline{KH}$ | 3. given |
| 4. $\overline{HJ} \cong \overline{HJ}$ | 4. reflexive |
| 5. $\triangle GHJ \cong \triangle KJH$ | 5. HL theorem |
| 6. $\overline{GH} \cong \overline{KJ}$ | 6. CPCTC |

