Triangle Congruence: Guided Notes

Student Name: _____

Date: _____

Learning Objectives

- Understand triangle congruence theorems
- Identify different methods of proving triangle congruence
- Apply congruence theorems to geometric proofs

Triangle Congruence Theorems

> **Congruence Definition:** Triangles are congruent when they have exactly the same shape and size.

Theorem	What Must Be Equal	Example
SSS (Side-Side-Side)	All 3 corresponding sides	△ABC ≅ △DEF
SAS (Side-Angle-Side)	2 sides + included angle	△PQR ≅ △XYZ
ASA (Angle-Side-Angle)	2 angles + included side	△LMN ≅ △STU
AAS (Angle-Angle-Side)	2 angles + non-included side	△JKL ≅ △RWQ

Proof Development Steps

1. Identify given information
2. Determine appropriate congruence theorem
3. State corresponding parts
4. Write logical proof sequence
5. Conclude congruence

Practice Proof Template

Given:

Prove:

Proof Steps:

1.
2.
3.
4.
5. **Conclusion:**

Reflection Questions

1. How are SSS and SAS theorems different?
2. When would you use ASA vs. AAS?
3. Why are congruence theorems important in geometry?

Notes Section

Use this space for additional notes and observations: