Lesson 3.3.1: Triangle Congruence

Two triangles are congruent if their parts can be paired so that the corresponding sides and the corresponding angles are congruent.

Properties of Congruence

1. Reflexive Property: $\triangle ABC \cong \triangle ABC$
2. Symmetric Property: If $\triangle ABC \cong \triangle XYZ$, then $\triangle XYZ \cong \triangle ABC$.
3. Transitive Property: If $\triangle ABC \cong \triangle DEF$ and $\triangle DEF \cong \triangle XYZ$, then $\triangle ABC \cong \triangle XYZ$.

Practice Exercises 3.3.1

A. Name the corresponding sides and angles of the following triangles.

1. $\triangle RMP \cong \triangle GIN$
2. $\triangle YEA \cong \triangle KCF$

B. Identify whether the following are **True** or **False** if $\triangle KHA \cong \triangle REN$.

1. $\triangle KAH \cong \triangle RNE$
2. $\triangle AHK \cong \triangle ERN$
3. $\triangle AKH \cong \triangle NRE$
4. $\triangle HAK \cong \triangle ENR$
5. $\triangle KHA \cong \triangle RNE$

Activity 3.3.1

A. Name the corresponding sides and angles of the following triangles.

1. $\triangle ABC \cong \triangle HIJ$
2. $\triangle JKL \cong \triangle XYZ$

B. Identify whether the following are **True** or **False** if $\triangle DAR \cong \triangle WIN$.

1. $\triangle DRA \cong \triangle WNI$
2. $\triangle ARD \cong \triangle NWI$
3. $\triangle RAD \cong \triangle NIW$
4. $\triangle ADR \cong \triangle IWN$
5. $\triangle RDA \cong \triangle NIW$

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