Name _____   Date _____

Geometric Proofs On Lines and Angles - Guided Lesson Explanation

Explanation#1

∠1 ≅ ∠2   (Given)

∠1 ≅ ∠3   Vertical angles are equal

∠2 ≅ ∠3   ≅ of angles transitive

∠2 ≅ ∠4   Vertical angles are equal

∠3 ≅ ∠4   ≅ of angles transitive

Explanation#2

C is the midpoint of AB (Given)

$\overline{AC}$ ≅ $\overline{CB}$ (Definition of Midpoint)

$\overline{CB}$ ≅ $\overline{DE}$ (Given)

$\overline{AC}$ ≅ $\overline{DE}$ (≅ of segments is transitive.)

Explanation#3

∠1 ≅ ∠5 (X || Y)

∠5 ≅ ∠8 (Vertical opposite angle)

So, ∠1 ≅ ∠8