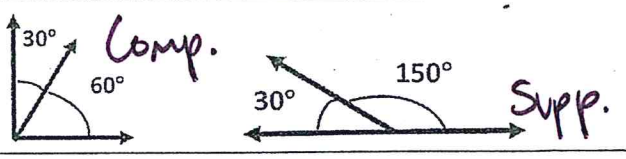
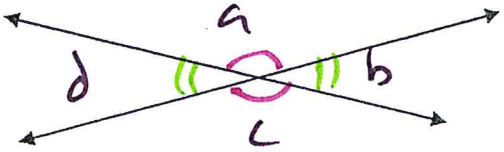
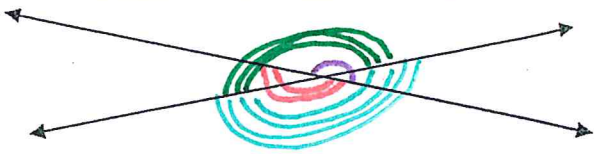
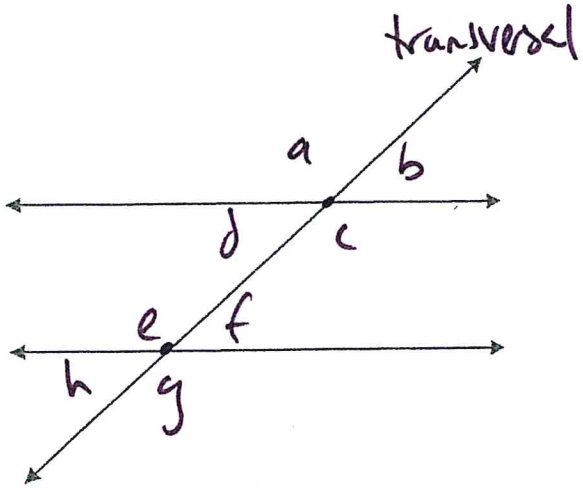
MATH 8: 9.1 Angle Relationships TOOLKIT Name:_____

Parallel Lines Cut by a Transversal

Vocabulary	Picture/Example
Complementary: ∠s that add to 90° Supplementary: ∠s that add to 180°	
Vertical angles: angles that are opposite. They have the **same** measure.	
Adjacent angles: angles that are **next** to each other. They share a vertex and a side but do **not** overlap	
Transversal: A line that intersects two lines in the same plane at two different points (or more)	
Corresponding angles: lie on the **same** side of the transversal, ~~on the same side~~ Ex: ∠a ≅ ∠e, ∠c ≅ ∠g	
Alternate interior angles: nonadjacent angles that lie on **opposite** sides of the transversal on the **IN**side of the // lines ∠d ≅ ∠f; ∠c ≅ ∠e	
Alternate exterior angles: lie on the **opposite** sides of the transversal on the **OUT**side of the // lines ∠a ≅ ∠g; ∠b ≅ ∠h	
Same-side interior angles: lie on the **same** side of the transversal **IN**side the parallel lines are supplementary (add to 180°) ∠e supp. ∠d; ∠c supp. ∠f	

Examples:

Find the measure of each angle when m∠7=125°

m∠2= _____, because _____

m∠3= _____, because _____

m∠4= _____, because _____

m∠1= _____, because _____

m∠5= _____, because _____

m∠6= _____, because _____

m∠8= _____ because