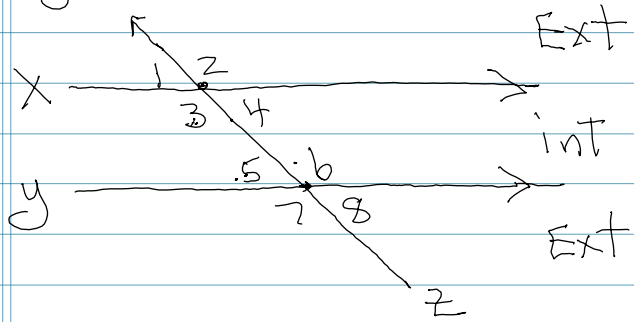


# Day 9 Parallel Lines update

given:  $X \parallel Y$  with Transversal  $Z$



vertical angles for  $X$  and  $Z$   
 $\angle 1$  and  $\angle 4$   
 $\angle 2$  and  $\angle 3$   
for  $Y$  and  $Z$   
 $\angle 5$  and  $\angle 8$   
 $\angle 6$  and  $\angle 7$

corresponding angles:  $\angle 1$  and  $\angle 5$   
 $\angle 3$  and  $\angle 7$   
 $\angle 2$  and  $\angle 6$   
 $\angle 4$  and  $\angle 8$

Alternate interior angles:  $\angle 3$  and  $\angle 6$   
 $\angle 4$  and  $\angle 5$

Alternate external angles:  $\angle 1$  and  $\angle 8$   
 $\angle 2$  and  $\angle 7$

same side interior angles  $\angle 3$  and  $\angle 6 = 180^\circ$   
 $\angle 4$  and  $\angle 5 = 180^\circ$