

objective: To introduce geometric proofs with angles/line segments. 1/30/19

• Two column proofs : Statements | Reasons

• Possible Reasons (justifications) :

properties

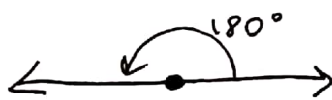
definitions (definition of...)

theorem

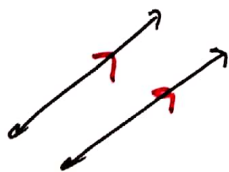
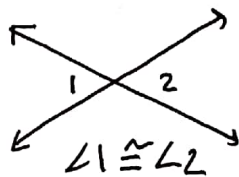
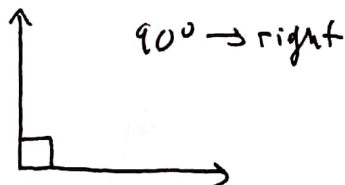
postulates/Axioms

• Assumptions :

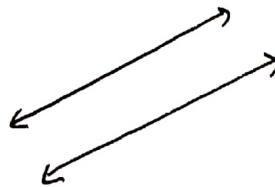
Do's :



Straight angle



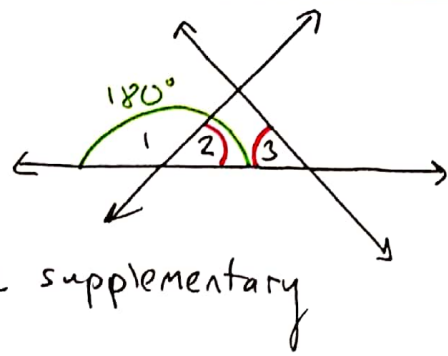
Don'ts :



Example:

Given: $\angle 2 \cong \angle 3$

Prove: $\angle 1$ and $\angle 3$ are supplementary



statements	Reasons
1.) $\angle 2 \cong \angle 3$	1.) Given
2.) $m\angle 2 = m\angle 3$	2.) definition of congruence
3.) $\angle 1$ and $\angle 2$ are supplementary	3.) Linear ^{Pair} theorem
4.) $m\angle 1 + m\angle 2 = 180^\circ$	4.) definition of supplementary angles
5.) $m\angle 1 + m\angle 3 = 180^\circ$	5.) Substitution property
6.) $\angle 1$ and $\angle 3$ are supplementary	6.) definition of supplementary angles.