

1.4 Beginning Proofs (also see samples & examples in OTB)

Name: _____

Date: _____

Geometry WS: 1.4

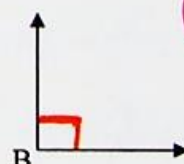
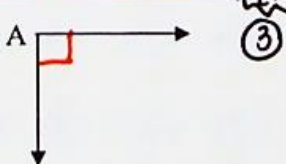
1) Name the 5 components of a 2-column proof: Givens, Diagram, Statements, Reasons, Prove (or Conclusion)

Be sure to mark givens & allowable assumptions!

Number these!

2) Proof of theorem 1: **Thm 1: All right angles are congruent.** *DPT card*

① Given: $\angle A$ is a right angle
 $\angle B$ is a right angle *Mark!*



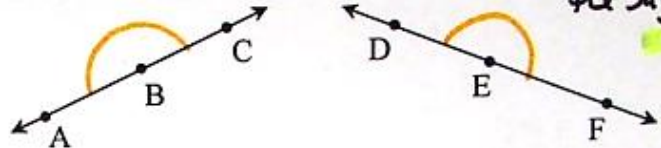
* Since this is a proof of the theorem, you are able to omit steps 2 & 4 in your proofs!!

② Prove: $\angle A \cong \angle B$

④ Statements	⑤ Reasons
1. $\angle A$ is a right angle	1. Given
* 2. $m\angle A = 90$	2. If an \angle is a right \angle , then its measure is 90°
3. $\angle B$ is a right angle	3. Given
* 4. $m\angle B = 90$	4. Same as 2
5. $\angle A \cong \angle B$	5. <i>If 2 \angles have the same measure, then they are \cong</i>

3) Proof of theorem 2: **Thm 2: All straight angles are congruent.** *DPT card*

Given: $\angle ABC$ is a straight angle
 $\angle DEF$ is a straight angle



* In this proof, the straight angles were given... BUT if they were not stated as givens, we could assume the same from the **DIAGRAM!**

Prove: $\angle ABC \cong \angle DEF$

Statements	Reasons
1. $\angle ABC$ is a straight angle	1. Given
* 2. $m\angle ABC = 180$	2. If an \angle is a straight \angle , then its measure is 180°
3. $\angle DEF$ is a str. \angle	3. Given
* 4. $m\angle DEF = 180$	4. Same as 2
5. $\angle ABC \cong \angle DEF$	5. <i>If 2 \angles have the same measure, then they are \cong</i>

* Since this is a proof of the theorem, you are able to omit steps 2 & 4 and use the theorem in your proofs!!