List of Justifications Up To Chapter 3

Vertical angles are ___≅___   Linear pairs are ~~Compl~~ Suppl.

___||___ lines form Suppl Consecutive interior angles

___||___ lines form ___≅___ Corresponding angles

___||___ lines form ___≅___ Alternate interior angles

___||___ lines form ___≅___ Alternate exterior angles

___≅___ Corresponding angles form ___||___ lines

Suppl Consecutive interior angles form ___||___ lines

___≅___ Alternate Interior angles form ___||___ lines

___≅___ Alternate Exterior angles form ___||___ lines

Def of ⊥   Def of Compl   Def of Suppl.   Def of < bisector

Angle addition   Segment addition   Def of Midpoint

Substitution   Def. right angle

Angle addition (straight angle)   Triangle Sum Theorem

Proving Angle Relationships and Parallel Lines: In Class Practice

1. Given: <7≅<1 and l // p
Prove: <5≅<3
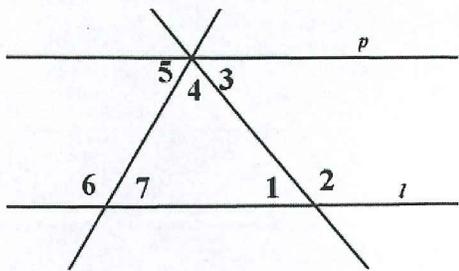
1. ∠7≅∠1 and l‖p	1. given
2. ∠5≅∠7, ∠1≅∠3	2. // lines form ≅ alt int. ∠s.
3. ∠7≅∠3	3. subs.
4. ∠5≅∠3	4. subs.

2. Given: <1 and <3 are supplementary
Prove: y || a
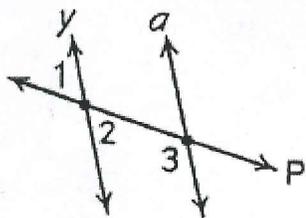
1. ∠1 and ∠3 are suppl.	1. given
2. ∠1 + ∠3 = 180°	2. def of sup.
3. ∠1≅∠2	3. vertical ∠s are ≅
4. ∠2 + ∠3 = 180°	4. Subs.
5. y‖a	5. suppl. con. int ∠s form // lines.

3. Proof of the Consecutive Interior Angles Converse Theorem:

- If consecutive interior angles are ___Suppl.___ then the lines are ___parallel___.

    Given: ∠1 & ∠2 are supplementary
    Prove: c ‖ d
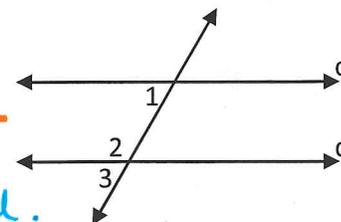
1. ∠1 and ∠2 are suppl.	1. given
2. ∠1 + ∠2 = 180°	2. def of suppl.
3. ∠3 + ∠2 = 180	3. linear pairs are suppl.
4. ∠1 + ∠2 = ∠3 + ∠2	4. Substitution
5. ∠1≅∠3	5. subtraction
6. c‖d	6. ≅ corr. ∠s form // lines