

Honors Geometry**Ch 3 Notes Packet****Sec 3-1:**

After this section you will have completed the following Common Core State Standard(s):

- **G.CO.1: Know precise definitions of angle, circle, perpendicular and parallel lines and line segments based on the undefined notions of point, line distance along line/around an arc, etc.**

And will be improving your skills in the following Mathematical Practice(s):

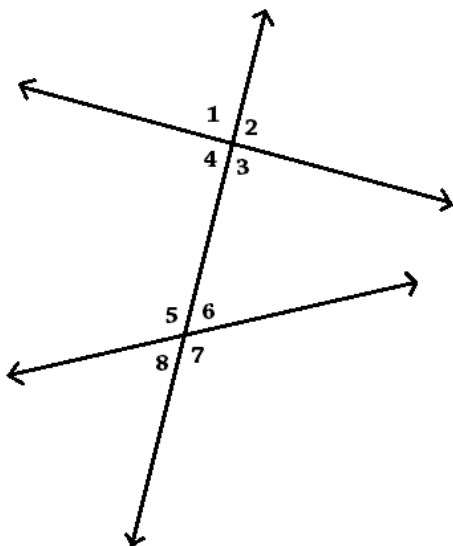
- 1. Make sense of problems and persevere in solving them**
- 3. Construct viable arguments and critique the reasoning of others**

Specifically, you should be able to:

- **Identify the relationship between 2 lines or 2 planes**
- **Name angle pairs formed by parallel lines and transversals**

Parallel Lines:**Parallel Planes:****Skew Lines:**

A _____ is a line that intersects _____ other coplanar lines at _____.

Interior Angles:**Exterior Angles:**

Corresponding Angles

Alternate Interior Angles

Alternate Exterior Angles

Consecutive Interior Angles

Examples:

Sec 3-2:

After this section you will have completed the following Common Core State Standard(s):

- **G.CO.1: Know precise definitions of angle, circle, perpendicular and parallel lines and line segments based on the undefined notions of point, line distance along line/around an arc, etc.**

And will be improving your skills in the following Mathematical Practice(s):

1. **Make sense of problems and persevere in solving them**
3. **Construct viable arguments and critique the reasoning of others**

Specifically, you should be able to:

- **Use theorems to determine the relationships between specific angle pairs**
- **Use algebra to find angle measures**

Corresponding angles postulate: If two _____ lines are cut by a _____ then corresponding angles are _____.

Alternate Interior/Alternate Exterior/Consecutive Interior angles theorems:

If two _____ lines are cut by a _____ then...

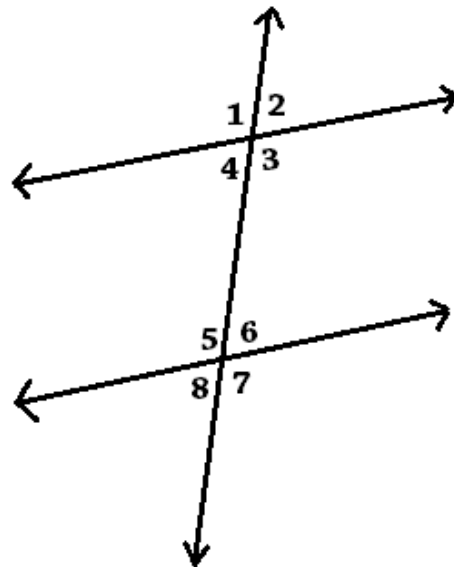
- alternate interior angles are _____.
- alternate exterior angles are _____.
- consecutive interior angles are _____.

Corr. \angle 's post.

If _____ then....

Alt. Int. \angle 's thm.

If _____ then....

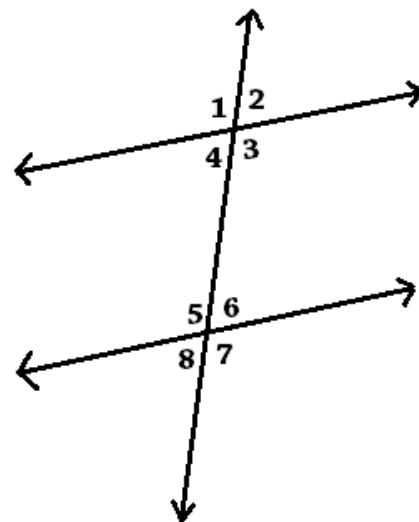


Alt. Ext. \angle 's thm.

If _____ then....

Cons. Int. \angle 's thm.

If _____ then....



Examples:

Sec 3-3 & 3-4:

After this section you will have completed the following Common Core State Standard(s):

- **G.GPE.5: Prove the slope criteria for parallel and perpendicular and use them to solve geometric problems**

And will be improving your skills in the following Mathematical Practice(s):

- 4. Model with mathematics**
- 7. Look for and make use of structure**
- 8. Look for and express regularity in repeated reasoning**

Specifically, you should be able to:

- **Find slopes of lines and use it to identify parallel and perpendicular lines**
- **Write equations of lines given information about the graph**
- **Solve problems by writing equations**

Slope=

_____ lines have the _____ slope.

_____ lines _____ slopes.

All vertical lines are _____.

Vertical and horizontal lines are _____.

Slope intercept form:

Point slope form:

Examples:

Sec 3-5:

After this section you will have completed the following Common Core State Standard(s):

- **G.CO.9: Prove theorems about lines and angles**

And will be improving your skills in the following Mathematical Practice(s):

- 1. Make sense of problems and persevere in solving them**
- 3. Construct viable arguments and critique the reasoning of others**

Specifically, you should be able to:

- **Recognize angle pairs that occur with parallel lines**
- **Prove that 2 lines are parallel**

Converse of corresponding angles postulate:

If two lines are cut by a transversal such that corresponding angles are _____, then the lines are _____.

Converse of Alternate Interior/Alternate Exterior/Consecutive Interior angles theorems:

If two lines are cut by a transversal such that...

- alternate interior angles are _____,
- alternate exterior angles are _____, or
- consecutive interior angles are _____

then the lines are _____.

If two lines are parallel to the same line, then they are _____ to each other.

If two lines are perpendicular to the same line, then they are _____ to each other.

Parallel Postulate: Given a line and a point not on a line, there is exactly _____ that is _____ to the given line.

Examples:

Sec 3-6:

After this section you will have completed the following Common Core State Standard(s):

- **G.MG.3: Apply geometric methods to solve problems**

And will be improving your skills in the following Mathematical Practice(s):

- 2. Reason abstractly and quantitatively**
- 4. Model with mathematics**

Specifically, you should be able to:

- **Find the distance between a point and a line**
- **Find the distance between parallel lines**

Perpendicular Postulate: Given a line and point not on a line, there is exactly _____ that _____ to the given line.

The distance from a point to a line is the

_____.



The distance between parallel lines is the

_____.



Equidistant:

Examples: