

<name>

Class: Honors Geometry

Date: <date>

Topic: Lesson 1-4 (Measuring Segments, and Angles)

One-to-one
correspondence

Pair every item in 1 set w/one & exactly 1 item in another set, none left over

Postulate 1-5

The Ruler Postulate

There's a 1-to-1 correspondence btwn real # line & the pts on a line
**** You can measure the length of a segment. ****

Segment length

Given \overline{AB} , the length of $\overline{AB} = AB = |a - b|$

Congruent segments

Two segments with same len

Symbol is \cong

If $AB = FE$ then $\overline{AB} \cong \overline{FE}$

Example

Pg 29, #2, optionally show steps

Postulate 1-6

The Segment Addition Postulate

If pt B is on \overline{AC} and between pts A & C , then $AB + BC = AC$
<diagrams as necessary>

Example

Pg 29, #10, optionally show steps

Midpoint of a segment

The pt that divides it into 2 congruent segments
<diagrams as necessary>

Angle

2 rays that share common endpoint & aren't on same line

- Rays are the sides
- Endpoint is the vertex
- Symbol is \angle
- Named:
 - $\angle ABC$ (vertex point in middle always)
 - $\angle B$ (just use the vertex point)
 - $\angle 1$ (if you've numbered the angles)
- Only use vertex naming if no confusion

<diagrams as necessary>

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Postulate 1-7

The Protractor Postulate

There is a 1-to-1 correspondence btwn the real #'s 0-180 and the angles on one side of a line

**** You can measure an angle in degrees. ****

- Symbol for measure of an angle (COD): $m \angle COD$.

<diagrams as necessary>

Types of angles

- Acute: $0^\circ < x < 90^\circ$
- Right: $x = 90^\circ$
- Obtuse: $90^\circ < x < 180^\circ$
- Straight: $x = 180^\circ$

Postulate 1-8

The Angle Addition Postulate

If point B lies in the interior of $\angle ABC$,
then $m \angle ABD + m \angle DBC = m \angle ABC$

<diagrams as necessary>

Congruent angles

Angles with the same measure.

If $m \angle COD = m \angle FGH$, then $\angle COD \cong \angle FGH$