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| **Grade Level** \*9th Accelerated Coordinate Alg | **Teacher/Room**: \*LPayne / \* 181 **Course(s)/ Period(s):** \* **3rd/4th Week of:** 10/20-10/24 |
| **Unit Vocabulary:** Unit 7- see attached |
| **Instructional Strategies Used:** direct instruction, independent study, interactive instruction, partners, task, GSP |
| **Day 1** | **Day 2** | **Day 3** | **Day 4** | **Day 5** |
| **Common Core Standard(s)**:**MCC9-12.G.CO.10** Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180 degrees; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point. | **Common Core Standard(s)**:**MCC9-12.G.CO.6** Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent. **MCC9-12.G.CO.7** Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent. **MCC9-12.G.CO.8** Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions. | **Common Core Standard(s)**:**MCC9-12.G.CO.11** Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals. | **Common Core Standard(s)**:Review all from unit 7 | **Common Core Standard(s)**:Review all from unit 7 |
| **EQ Question:*** How can you use the points of concurrency to help the company make business decisions?
 | **EQ Question:*** How can you determine and describe how triangles are congruent?
 | **EQ Question:**How can you prove theorems about parallelograms in the coordinate plane?  | **EQ Question:*** How can you prove theorems about parallelograms in the coordinate plane? \*
 | **EQ Question:*** Can you describe points of concurrency, how triangles are congruent, and how to describe quadrilaterals in the coordinate plane?
 |
| **Mini Lesson:** * Hand back quizzes

**Activating Strategies:** \*Students will construct points of concurrency**Lesson:** * Define median, perpendicular bisector, altitude, angle bisector, orthocenter, centroid, circumcenter, incenter
* Centers of Triangles
* Quiz properties of quadrilaterals

**Resource/Materials:**Task, mira, patty paper,  | **Mini Lesson:** * Check homework

**Activating Strategies:** \*review 5 ways to prove triangles congruent **Lesson:** * SSS,SAS,ASA,AAS,HL
* Proving two triangle congruent

**Resource/Materials:**Rulers • Protractors • Patty Paper • Practice with Congruent Triangles worksheet | **Mini Lesson:** * Check homework

**Activating Strategies:** \*model proving something mathematically**Lesson:** * Proving Quadrilaterals in the Coordinate Plane

**Resource/Materials:**graph paper Task | **Mini Lesson:** * Check homework

**Activating Strategies:** \*unit conversions**Lesson:** * Review topics

**Resource/Materials:*** Review quadrilaterals and triangles
 | **Mini Lesson:** * Unit conversion

**Activating Strategies:** \*answer any questions**Lesson:** * TEST

**Resource/Materials:**Test, calculators, patty paper, ruler, graph paper.  |
| **Differentiation:*****Content/Process/Product:*** * Students will use patty paper to construct points of center

***Grouping Strategy:******Assessment:**** *\**
 | **Differentiation:*****Content/Process/Product:*** * Students will be at different stations proving triangles congruent

***Grouping Strategy:**** Based on their quiz from Friday.

***Assessment:**** *Test on Friday*
 | **Differentiation:*****Content/Process/Product:*** * Students will prove quadilaterals by any method that they choose themselves.

***Grouping Strategy:******Assessment:**** *Completion of task*
 | **Differentiation:*****Content/Process/Product:*** * \*

***Grouping Strategy:**** \*

***Assessment:**** *\**
 | **Differentiation:** ***Content/Process/Product:*** * \*

***Grouping Strategy:**** \*

***Assessment:****Student may use any resource (used during task) to help them complete their test.*  |
| **Assessment :*****Pre-Test:******Post-Test:*** ***Summative:*** ***Performance Based:***  | **Assessment :*****Pre-Test:******Post-Test:*** ***Summative:*** ***Performance Based:***  | **Assessment :*****Pre-Test:******Post-Test:*** ***Summative:*** ***Performance Based:***  | **Assessment :*****Pre-Test:******Post-Test:*** ***Summative:*** ***Performance Based:*** completion of task this week.  | **Assessment :*****Pre-Test:******Post-Test:*** ***Summative: TEST******Performance Based:***  |
| **Homework:** Unit conversion worksheet Weekly worksheet- review 4,5,6 | **Homework: Proving triangles congruent worksheet** | **Homework**: Unit 1 conversions ws, complete task | **Homework:** Review WSUnit 1 conversions | **Homework:**  |

Resources and Reflective Notes:

**Line:** One of the basic undefined terms of geometry. Traditionally thought of as a set of points that has no thickness but its length goes on forever in two opposite directions. denotes a line that passes through point A and B. *AB*

• **Line Segment or Segment:** The part of a line between two points on the line. denotes a line segment between the points A and B. *AB*

• **Linear Pair:** Adjacent, supplementary angles. Excluding their common side, a linear pair forms a straight line.

• **Measure of each Interior Angle of a Regular n-gon:** *nn*)2(180−

**Median of a Triangle:** A segment is a median of a triangle if and only if its endpoints are a vertex of the triangle and the midpoint of the side opposite the vertex.

• **Midsegment:** A line segment whose endpoints are the endpoint of two sides of a triangle is called a midsegment of a triangle.

• **Orthocenter:** The point of concurrency of the altitudes of a triangle.

• **Parallel Lines:** Two lines are parallel if they lie in the same plane and they do not intersect.

• **Perpendicular Bisector:** A perpendicular line or segment that passes through the midpoint of a segment.

• **Perpendicular Lines:** Two lines are perpendicular if they intersect at a right angle.

• **Plane:** One of the basic undefined terms of geometry. Traditionally thought of as going on forever in all directions (in two-dimensions) and is flat (i.e., it has no thickness).

• **Point:** One of the basic undefined terms of geometry. Traditionally thought of as having no length, width, or thickness, and often a dot is used to represent it.

• **Proportion**: An equation which states that two ratios are equal.

• **Ratio**: Comparison of two quantities by division and may be written as r/s, r:s, or r to s.

• **Ray:** A ray begins at a point and goes on forever in one direction.

• **Reflection:** A transformation that "flips" a figure over a line of reflection

 • **Reflection Line:** A line that is the perpendicular bisector of the segment with endpoints at a pre-image point and the image of that point after a reflection.

• **Regular Polygon:** A polygon that is both equilateral and equiangular.

• **Remote Interior Angles of a Triangle:** the two angles non-adjacent to the exterior angle.

• **Rotation:** A transformation that turns a figure about a fixed point through a given angle and a given direction.

• **Same-Side Interior Angles**: Pairs of angles formed when a third line (a transversal) crosses two other lines. These angles are on the same side of the transversal and are between the other two lines. When the two other lines are parallel, same-side interior angles are supplementary.

• **Same-Side Exterior Angles**: Pairs of angles formed when a third line (a transversal) crosses two other lines. These angles are on the same side of the transversal and are outside the other two lines. When the two other lines are parallel, same-side exterior angles are supplementary.

• **Scale Factor**: The ratio of any two corresponding lengths of the sides of two similar figures.

• **Similar Figures**: Figures that have the same shape but not necessarily the same size.

• **Skew Lines:** Two lines that do not lie in the same plane (therefore, they cannot be parallel or intersect).

• **Sum of the Measures of the Interior Angles of a Convex Polygon:** 180º(n – 2).

• **Supplementary Angles:** Two angles whose sum is 180 degrees.

• **Transformation**: The mapping, or movement, of all the points of a figure in a plane according to a common operation.

• **Translation:** A transformation that "slides" each point of a figure the same distance in the same direction

• **Transversal:** A line that crosses two or more lines.

• **Vertical Angles:** Two nonadjacent angles formed by intersecting lines or segments. Also called opposite angles.