Unit # 7 :Coordinate Geometry and Quadrilaterals Self-Check/Tracker

Need help? Use your notes, practice problems, bellringers, and other work.

Level 4 Advanced (Blue) 97% or 100%
Level 3 Proficient (Green) 93%
Level 2 Basic (Yellow) 75% or 85%

Priority Standards

HSG-GPE.B.4-U4/U5 Expressing Geometric Properties with Equations
Use coordinates to prove simple geometric theorems algebraically

4. Use coordinates to prove simple geometric theorems algebraically. ***For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point (1, √3) lies on the circle centered at the origin and containing the point (0, 2).***

HSG-GPE.B.5 Expressing Geometric Properties with Equations
Use coordinates to prove simple geometric theorems algebraically

5. Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).

HSG-CO.C.11 Congruence
Prove geometric theorems

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.***

Commented [SK1]: This is the prioritized standards that have been chosen for this unit (this is unit 7 from our geometry class).

SUCCESS CRITERIA	Circle Your Proficiency Level			
	CFA #1	CFA #2	CFA #3	TEST
LEVEL 2 **I can... find the slope of a line** $m = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$ **I can...identify if two lines are parallel or perpendicular using slope** Parallel Lines and Their Slopes $m_1 = m_2$ Perpendicular Lines and Their Slopes $m_1 = -\frac{1}{m_2}$	HSG-GPE.B.5 A P B B B HSG-GPE.B.4-U4/U5 A P B B B			HSG-GPE.B.4-U4/U5 A P B B B HSG-GPE.B.5 A P B B B

Commented [2]: These are the standards that are linked to checkpoint (CFA) 1. If you go down further in the unit plan, you can see that checkpoint #1 is on day 2. This organization in this chart also shows that the checkpoint is only assessing score 2 content (level 2) in the proficiency scale.

I can... find the midpoint given 2 points **Substitute the Values of (x_1,y_1) and (x_2,y_2) numbers into the Midpoint Formula:** $(X_1+X_2) / 2$ and $(Y_1+Y_2) / 2$ **I can...use the distance formula to find a length of a segment** •**Label the Points as A and B** •**Label A (x_1,y_1) and B (x_2,y_2)** •**Substitute the Values of (x_1,y_1) and (x_2,y_2) numbers into the Distance Formula:** $AB = \sqrt{(X_2-X_1)^2 + (Y_2-Y_1)^2}$ •**Calculate and Simplify**				
LEVEL 3 **I can... use the properties of parallelograms** 1. OPPOSITE SIDES ARE PARALLEL 2. OPPOSITE SIDES ARE CONGRUENT 3. OPPOSITES ANGLES ARE CONGRUENT 4. DIAGONALS BISECT EACH OTHER 5. CONSECUTIVE ANGLES ARE SUPPLEMENTARY • **Properties of rectangles** 1. FOUR RIGHT (90 DEGREE) ANGLES 2. OPPOSITE SIDES ARE PARALLEL 3. OPPOSITE SIDES ARE CONGRUENT 4. OPPOSITES ANGLES ARE CONGRUENT 5. DIAGONALS ARE CONGRUENT AND BISECT EACH OTHER 6. CONSECUTIVE ANGLES ARE SUPPLEMENTARY		**HSG-CO.C.11** A P B B B		**HSG-CO.C.11** A P B B B

• **Properties of rhombi** 1. FOUR CONGRUENT SIDES 2. OPPOSITE SIDES ARE PARALLEL 3. OPPOSITES ANGLES ARE CONGRUENT 4. DIAGONALS BISECT EACH OTHER 5. DIAGONALS ARE PERPENDICULAR 6. DIAGONALS BISECT OPPOSITE ANGLES 7. CONSECUTIVE ANGLES ARE SUPPLEMENTARY • **Properties of a square** 1. FOUR CONGRUENT SIDES 2. OPPOSITE SIDES ARE PARALLEL 3. OPPOSITES ANGLES ARE CONGRUENT AND MEASURE 90 DEGREES 4. DIAGONALS ARE CONGRUENT AND BISECT EACH OTHER 5. DIAGONALS ARE PERPENDICULAR 6. DIAGONALS BISECT OPPOSITE ANGLES 7. CONSECUTIVE ANGLES ARE SUPPLEMENTARY				
LEVEL 3 **I can... use the properties of trapezoids** 1. ONE PAIR OF OPPOSITE SIDES PARALLEL 2. ANGLES ADD TO 360 DEGREES • **Properties of isosceles trapezoids** 1. TWO PAIRS OF BASE ANGLES ARE CONGRUENT 2. ONE PAIR OF OPPOSITE SIDES PARALLEL 3. DIAGONALS ARE CONGRUENT 4. LEGS ARE CONGRUENT 5. OPPOSITE ANGLES ARE SUPPLEMENTARY **I can...use the properties of kites** • TWO PAIRS OF CONSECUTIVE SIDES CONGRUENT • DIAGONALS PERPENDICULAR • ONE PAIR OF ANGLES CONGRUENT • DIAGONALS BISECT ONE PAIR OF ANGLES • ONE DIAGONAL BISECTS THE OTHER			**HSG-CO.C.11** A P B B B	
LEVEL 4 **I can...use distance, slope, and midpoint formulas to classify quadrilaterals**				

Resource : Coordinate Geometry & Quadrilaterals Powerpoint

Teachers Pay Teachers - Everything is in the Shared Drive (Use Notes/Example Pages Only)

Week 1 of Coordinate Geometry and Quadrilaterals			
Day 1: Coordinate Geometry Formulas • Pre-Test (Mastery Connect) • Slope - Parallel and Perpendicular Slope • Distance Formula • Midpoint Formula LT: I will review...slope of parallel and perpendicular lines, the distance between two points, and the finding the midpoint between two points SC: I can… • determine that the slopes are equal if two lines are parallel and that the slopes are opposite reciprocals if two lines are perpendicular **Parallel Lines and Their Slopes** $m_1 = m_2$ **Perpendicular Lines and Their Slopes** $m_1 = -\frac{1}{m_2}$ • use the pythagorean theorem or distance formula to find the length of a segment	Day 2: Hierarchy of Quadrilaterals • WORD WALL - Hierarchy of Quadrilateral • Day 1 - Coordinate Geometry Foldable • Checkpoint #1(Mastery Connect) LT: I will learn… to identify special quadrilaterals SC: I can...use the distance formula, midpoint formula, and slope to classify a quadrilateral	Day 3: Properties of Parallelograms & Rectangles • Properties of Parallelograms • Answer Key • Properties of Rectangles • Answer Key LT: I will learn to...use the properties of parallelograms and rectangles SC: I can...apply properties to solve for variables in a parallelogram and rectangle **Properties of parallelograms** • OPPOSITE SIDES ARE PARALLEL • OPPOSITE SIDES ARE CONGRUENT • OPPOSITES ANGLES ARE CONGRUENT • DIAGONALS BISECT EACH OTHER • CONSECUTIVE ANGLES ARE SUPPLEMENTARY **Properties of rectangles** • FOUR RIGHT (90 DEGREE) ANGLES • OPPOSITE SIDES ARE PARALLEL • OPPOSITE SIDES ARE CONGRUENT • OPPOSITES ANGLES ARE CONGRUENT • DIAGONALS ARE CONGRUENT AND BISECT EACH OTHER	Day 4: Properties of Rhombi & Squares • Properties of Rhombi & Squares • Answer Key • Quizizz Properties of Parallelograms • Quizizz Parallel and Perpendicular Lines LT: I will learn to...use the properties of rhombi and squares SC: I can...apply properties to solve for variables in a rhombi and squares **Properties of rhombi** • FOUR CONGRUENT SIDES • OPPOSITE SIDES ARE PARALLEL • OPPOSITES ANGLES ARE CONGRUENT • DIAGONALS BISECT EACH OTHER • DIAGONALS ARE PERPENDICULAR • DIAGONALS BISECT OPPOSITE ANGLES • CONSECUTIVE ANGLES ARE SUPPLEMENTARY **Properties of a square** • FOUR CONGRUENT SIDES • OPPOSITE SIDES ARE PARALLEL • OPPOSITES ANGLES ARE CONGRUENT AND MEASURE 90 DEGREES • DIAGONALS ARE

Commented [SK3]: This is the link to the first checkpoint for the unit. If you look at the proficient scale above, you will see that it only assesses level 2 (score 2) content. Once the CFA is administered, content teams enter their data on the spreadsheet and then list students by name that are not yet proficient. One meeting per week is designated for assigning students to Devil Pride Time (tier 2 intervention). They assign students to the correct class. Once students are teacher-assigned, they cannot change it. To help this process, EHS has assigned priority days for teachers to pull students. Tues is English, Wed is math, thurs is science/social studies.

•**Label the Points as A and B** •**Label A (x_1,y_1) and B (x_2,y_2)** •**Substitute the Values of (x_1,y_1) and (x_2,y_2) numbers into the Distance Formula:** $AB = \sqrt{(X_2-X_1)^2 + (Y_2-Y_1)^2}$ •**Calculate and Simplify** • use the midpoint formula to find the middle of a segment **Substitute the Values of (x_1,y_1) and (x_2,y_2) numbers into the Midpoint Formula:** $(X_1+X_2) / 2$ and $(Y_1+Y_2) / 2$		• CONSECUTIVE ANGLES ARE SUPPLEMENTARY	CONGRUENT AND BISECT EACH OTHER • DIAGONALS ARE PERPENDICULAR • DIAGONALS BISECT OPPOSITE ANGLES • CONSECUTIVE ANGLES ARE SUPPLEMENTARY
Week 2 of Coordinate Geometry and Quadrilaterals			