

Keelie Kish Lesson Plan– Pre-AP Geometry

	<b>Wednesday (B)</b> <b>9/12</b>
<b>Objectives</b>	SWBAT: <ul style="list-style-type: none"><li>• Use deductive reasoning to prove that a conjecture is true and develop geometric arguments.</li><li>• Use properties to complete algebraic two-column proofs.</li></ul>
<b>P</b>	ENGAGE: (5 min) <ul style="list-style-type: none"><li>• <b>“Mathematically Perfect?”:</b> Show how to use the Fibonacci series to solve for the golden ratio. Have students come up with examples on their phones of the golden ratio in real life. Groups will each share their examples to the class.</li></ul>
<b>LA</b>	EXPLORE: (15 min) <ul style="list-style-type: none"><li>• Students will review proving statements geometrically from last class and work in groups on how to prove even and odd sums algebraically.</li><li>•</li></ul> EXPLAIN: (20 min) <ul style="list-style-type: none"><li>• Groups will share algebraic findings with class on the teacher’s iPad.</li><li>• Groups will define different vocab words to share with the class.</li></ul> ENGAGE: (7 min) <ul style="list-style-type: none"><li>• <b>“Proof by Uno”</b> Students will use Uno cards to find the sequence of plays between two cards. They will then use white boards and make a t-chart writing the “Starting Card” (ex. <i>Red 1</i>) at the top on the left, and “Given” on the right. They will then continue writing the Uno card names (<i>color and number</i>) on the left with the reason they can put it next in the sequence on the right (<i>same color or same number</i>).</li></ul>

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	<p>EXPLAIN: (10 min)</p> <ul style="list-style-type: none"><li>• Students will use algebraic properties on different slips of paper and put them in order to justify solving algebraic equations. They will then justify what steps are being solved on a separate sheet of paper (<i>multiplying, adding, distributing, etc.</i>)</li></ul> <p>ELABORATE: (10 min)</p> <ul style="list-style-type: none"><li>• <b>“Mark it Red”</b>: In groups, students will discuss if a Jeffrey’s proof is correct and justify why or why not.</li></ul> <p>ENGAGE: (2 min)</p> <ul style="list-style-type: none"><li>• <b>“NBA Hometowns”</b> Practice making IF/THEN statements using NBA players and their hometowns.</li></ul> <p>EXPLORE: (20 min)</p> <ul style="list-style-type: none"><li>• In groups, students will be given various statements which they will rewrite using If/Then format.</li></ul>
<b>N</b>	<p>EVALUATE/ASSESS:</p> <ul style="list-style-type: none"><li>• Student work will be assessed when presenting findings to the class on the iPad.</li></ul>
Resources	<ul style="list-style-type: none"><li>• SpringBoard Mathematics Geometry Book</li><li>• Uno Cards</li><li>• Algebraic Property Slips</li></ul>