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| **Class** | Geometry | **Topic** | U3 – Prove Lines Parallel | **Lesson** | 3 | **Of** | 6 |

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| **Objective** | Students will:   * The student will use the relationships between angles formed by two lines cut by a transversal to   1. determine whether two lines are parallel;   2. verify the parallelism, using algebraic and coordinate methods as well as deductive proofs; and   3. solve real-world problems involving angles formed when parallel lines are cut by a transversal. * The student will use pictorial representations, including computer software, constructions, and coordinate methods, to solve problems involving symmetry and transformation. This will include  1. investigating and using formulas for finding distance, midpoint, and slope; 2. applying slope to verify and determine whether lines are parallel or perpendicular;  * be able to complete guided proofs involving two lines parallel or not, that are cut by a transversal. * be able to construct proofs that involve two lines parallel or not, that are cut by a transversal. |
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| **“I Can” Statement** | I can identify properties for parallel lines and transversals and construct proofs using theorems and postulates. |

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| **Common Core Standards** | [CCSS.MATH.CONTENT.7.G.B.5](http://www.corestandards.org/Math/Content/7/G/B/5/) Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.  [CCSS.MATH.CONTENT.HSG.CO.C.9](http://www.corestandards.org/Math/Content/HSG/CO/C/9/)  Prove theorems about lines and angles. *Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints*. |
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| **Bell Work** | See 3-3 Bell Work |

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| **Procedures** | 1. Start and lead student discussion related to the bell work.  2. Distribute the Guided Notes  3. Present lesson or play a video lesson.  4. Khan Academy Video of Proving lines Parallel  5. Distribute Lesson Assignment. |

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| **Assessment** | Bell Work 3-3  Assignment 3-3  Exit Slip 3-3 |

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| **Additional Resources** | Khan Academy Quiz |