Closing Arguments Task Cards teacher guide

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| Given: ∠4 ≅ ∠6Prove: ∠5 ≅ ∠6

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| **Statement:** | **Reason:** |
| 1. ∠4 ≅ ∠6 | 1. Given |
| 2. ∠5 ≅ ∠4 | 2. Vertical Angles Theorem |
| 3. ∠5 ≅ ∠6 | 3. Transitive Property |

\*A paragraph proof has the same information as a two-column proof, but the statements and reasons are phrased in complete sentences. | Shape  Description automatically generated |
| Given: ∠1 ≅ ∠3Prove: ∠2 ≅ ∠4

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| **Statement:** | **Reason:** |
| 1. ∠1 ≅ 3 | 1. Given |
| 2. m∠1 + m∠2 = 90° | 2. Definition of Right Angles |
| 3. m∠3 + m∠4 = 90° | 3. Definition of Right Angles |
| 4. m∠1 + m∠2 = m∠3 + m∠4 | 4. Transitive Property |
| 5.  ∠2 = ∠4 | 5. Subtraction Property |
| 6. ∠2 ≅ 4 | 6. Definition of Congruent Angles |

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| Given: ∠AEC is a right angle ∠BED is a right angleProve: ∠AEB ≅ ∠CED

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| **Statement:** | **Reason:** |
| 1. ∠AEC is a right angle | 1. Given |
| 2. ∠BED is a right angle | 2. Given |
| 3. m∠AEB + m∠BEC = ∠AEC | 3. Angle Addition Postulate |
| 4. m∠AEB + m∠BEC = 90° | 4. Definition of Right Angles |
| 5. m∠BEC + m∠CED = ∠BED | 5. Angle Addition Postulate |
| 6. m∠BEC + m∠CED = 90° | 6. Definition of Right Angles |
| 7. m∠AEB + m∠BEC = m∠BEC + m∠CED | 7. Transitive Property |
| 8. m∠AEB = m∠CED | 8. Subtraction Property |
| 9. ∠AEB ≅ ∠CED | 9. Definition of Congruent Angles |

 | Shape  Description automatically generated with medium confidence |
| Given:  bisects ∠ DGF  intersects and Prove: ∠1 ≅ ∠2

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| **Statement:** | **Reason:** |
| 1.  bisects ∠ DGF | 1. Given |
| 2. m∠3 = m∠2 | 2. Definition of Angle Bisector |
| 3. m∠3 = m∠1 | 3. Vertical Angles Theorem |
| 4. m∠1 = m∠2 | 4. Transitive Property |
| 5. ∠1 ≅ ∠2 | 5. Definition of Congruent Angles |

 | Shape  Description automatically generated with medium confidence |
| Given: ∠3 ≅ ∠4Prove: ∠1 ≅ ∠2

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| **Statement:** | **Reason:** |
| 1. ∠3 ≅ 4 | 1. Given |
| 2. ∠1 and ∠3 make a Linear Pair | 2. Given |
| 3. ∠4 and ∠2 make a Linear Pair | 3. Given |
| 4. m∠1 + m∠3 = 180° | 4. Definition of Linear Pair |
| 5. m∠4 + m∠2 = 180° |  5. Definition of Linear Pair |
| 6. m∠1 + m∠3 = m∠4 + m∠2 | 6. Transitive Property |
| 7. m∠1 + m∠3 = m∠3 + m∠2 | 7. Substitution Property |
| 8. m∠1 = m∠2 | 8. Subtraction Property |
| 9. ∠1 ≅ ∠2 | 9. Definition of Congruent Angles  |

 | Shape  Description automatically generated with medium confidence |
| Given: ∠1 ≅ ∠4Prove: ∠2 ≅ ∠3

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| **Statement:** | **Reason:** |
| 1. ∠1 ≅ ∠4 | 1. Given |
| 2. ∠1 and ∠2 are Vertical Angles | 2. Given |
| 3. ∠3 and ∠4 are Vertical Angles | 3. Given |
| 4. m∠2 = m∠1  | 4. Vertical Angles Theorem |
| 5. m∠4 = m∠3 | 5. Vertical Angles Theorem |
| 6. m∠2 = m∠3 | 6. Transitive Property |
| 7. ∠2 ≅ ∠3 | 7. Definition of Congruent Angles |

 | Shape  Description automatically generated with medium confidence |