Closing Arguments Task Cards teacher guide

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Given: ∠4 ≅ ∠6  Prove: ∠5 ≅ ∠6   |  |  |  | | --- | --- | --- | | **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 ≅ ∠3  Prove: ∠2 ≅ ∠4   |  |  |  | | --- | --- | --- | | **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 | |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Given: ∠AEC is a right angle  ∠BED is a right angle  Prove: ∠AEB ≅ ∠CED   |  |  |  | | --- | --- | --- | | **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   |  |  | | --- | --- | | **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 ≅ ∠4  Prove: ∠1 ≅ ∠2   |  |  | | --- | --- | | **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 ≅ ∠4  Prove: ∠2 ≅ ∠3   |  |  |  | | --- | --- | --- | | **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 |