## EVIDENCE

| Term | Definition/Meaning |
|---|---|
| **Proof** | |
| **Justify** | |
| **Geometric proof** | |
| **Types of proofs** | |

**Reasons**

| Definition | Properties |
|---|---|
| • Definition of Angle Bisector<br>• Definition of Complementary Angles<br>• Definition of Congruent Angles<br>• Definition of Congruent Segments<br>• Definition of Linear Pair<br>• Definition of Midpoint<br>• Definition of Right Angles<br>• Definition of Segment Bisector<br>• Definition of Supplementary Angles<br>• Definition of Vertical Angles | • Addition Property of Equality<br>• Distributive Property<br>• Division Property of Equality<br>• Multiplication Property of Equality<br>• Reflexive Property<br>• Substitution Property of Equality<br>• Subtraction Property of Equality<br>• Symmetric Property<br>• Transitive Property |
| **Postulates** | **Theorems** |
| • Angle Addition Postulate<br>• Linear Pair Postulate<br>• Segment Addition Postulate | • Alternate Exterior Angles Theorem<br>• Alternate Interior Angles Theorem<br>• Angle Bisector Theorem<br>• Consecutive Interior Angles Theorem<br>• Corresponding Angles Theorem<br>• Midpoint Theorem<br>• Vertical Angles Theorem |

## Algebraic Proof

Given: $2x + 5 = 20 - 3x$

Prove: $x = 3$

| Statement | Reason |
|---|---|
| 1. $2x + 5 = 20 - 3x$ | 1. |
| 2. | 2. |
| 3. | 3. |
| 4. $x = 3$ | 4. |

## Creating a Proof

Given: AC = AB + AB


Prove: AB = BC

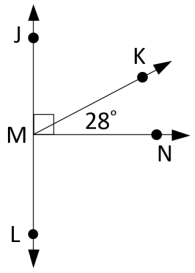
| Statement | Reason |
|---|---|
| 1. | 1. |
| 2. | 2. |
| 3. | 3. |
| 4. | 4. |

### Paragraph Proof

## Completing a Proof

Given: ∠KMN = 28°

Prove: ∠JMN = 90°




| Statement | Reason |
|---|---|
| 1. | 1. |
| 2. ∠JMK and ∠KMN are complementary angles | 2. Given |
| 3. ∠JMK + ∠KMN = ∠JMN | 3. |
| 4. ∠JMK + ∠KMN = 90° | 4. Definition of Complementary Angles |
| 5. | 5. |