| **Word** | **Definition & Meaning** |
| --- | --- |
| Proof |  |
| Justify |  |
| Geometric proof |  |
| Types of proofs |  |

# Reasons

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

# Algebraic Proof

|  | **Given:** 2*x* + 5 = 20 – 3*x* | **Statement** | **Reason** |
| --- | --- | --- | --- |
|  | **Prove:** *x* = 3 | 1. 2*x* + 5 = 20 – 3*x* | 1.  |
|  |  | 2.  | 2.  |
|  |  | 3.  | 3.  |
|  |  | 4. *x* = 3  | 4.  |

# Creating a Proof

**Paragraph Proof**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  | **Given:** *AC* = *AB* + *AB* |  |
| --- | --- | --- |
|  | **Prove:** *AB* = *BC* |  |
|  |  |  |
| **Statement** | **Reason** |
| 1.  | 1.  |
| 2.  | 2.  |
| 3.  | 3.  |
| 4.  | 4.  |
|  |  |

# Completing a Proof

|  | **Given:** *m*∠*KMN* = 28° | **Statement** | **Reason** |
| --- | --- | --- | --- |
|  | **Prove:** *m*∠*JMN* = 90° | 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. |