

Mathematical System

Jonathan R. Bacolod

Sauyo High School

What is a Mathematical System?

A mathematical system is a structure that consists of defined and undefined terms, axioms or postulates, and theorems.

What are the Components of a Mathematical System?

What are the Components of a Mathematical System?

1. Undefined Terms: terms that can only be explained using representations and/or descriptions

What are the Components of a Mathematical System?

1. Undefined Terms: terms that can only be explained using representations and/or descriptions
2. Defined Terms: terms that include a category or are formed using other defined words or terms

What are the Components of a Mathematical System?

1. Undefined Terms: terms that can only be explained using representations and/or descriptions
2. Defined Terms: terms that include a category or are formed using other defined words or terms
3. Axioms or Postulates: statements that are assumed to be true without proof

What are the Components of a Mathematical System?

1. Undefined Terms: terms that can only be explained using representations and/or descriptions
2. Defined Terms: terms that include a category or are formed using other defined words or terms
3. Axioms or Postulates: statements that are assumed to be true without proof
4. Theorems: statements that are proved from definitions, postulates, or using operations and facts that were already known

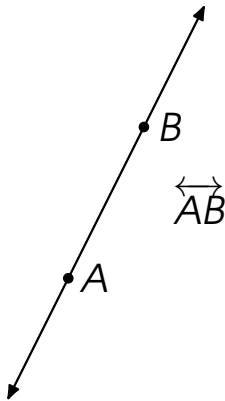
What are the Undefined Terms in Geometry?

1. Point



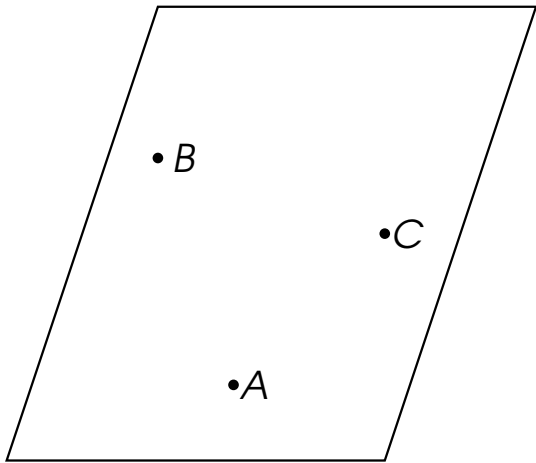
What are the Undefined Terms in Geometry?

2. Line



What are the Undefined Terms in Geometry?

3. Plane



What are Some Defined Terms in Geometry?

What are Some Defined Terms in Geometry?

1. Line Segment: a set of two points and all the points between them

What are Some Defined Terms in Geometry?

1. Line Segment: a set of two points and all the points between them
2. Collinear: If three or more points all belong to the same line they are said to be collinear.

What are Some Defined Terms in Geometry?

1. Line Segment: a set of two points and all the points between them
2. Collinear: If three or more points all belong to the same line they are said to be collinear.
3. Ray: a set of points consisting of a fixed point of a line and all the points of the line on the same side of the fixed point

What are Some Defined Terms in Geometry?

1. Line Segment: a set of two points and all the points between them
2. Collinear: If three or more points all belong to the same line they are said to be collinear.
3. Ray: a set of points consisting of a fixed point of a line and all the points of the line on the same side of the fixed point
4. Angle: a set of points consisting of the union of two rays with a common endpoint

What are Some Postulates in Geometry?

What are Some Postulates in Geometry?

1. Distributive Property:

$$(a)(b + c) = (a)(b) + (a)(c)$$

What are Some Postulates in Geometry?

1. Distributive Property:
 $(a)(b + c) = (a)(b) + (a)(c)$
2. Addition Property of Equality: If $a = b$
and $c = d$, then $a + c = b + d$.

What are Some Postulates in Geometry?

1. Distributive Property:
 $(a)(b + c) = (a)(b) + (a)(c)$
2. Addition Property of Equality: If $a = b$ and $c = d$, then $a + c = b + d$.
3. Reflexive Property: $a = a$, anything is equal to itself

What are Some Postulates in Geometry?

1. Distributive Property:
 $(a)(b + c) = (a)(b) + (a)(c)$
2. Addition Property of Equality: If $a = b$ and $c = d$, then $a + c = b + d$.
3. Reflexive Property: $a = a$, anything is equal to itself
4. Subtraction Property of Equality: If $a = b$ and $c = d$, then $a - c = b - d$.

What are Some Postulates in Geometry?

1. Distributive Property:
 $(a)(b + c) = (a)(b) + (a)(c)$
2. Addition Property of Equality: If $a = b$ and $c = d$, then $a + c = b + d$.
3. Reflexive Property: $a = a$, anything is equal to itself
4. Subtraction Property of Equality: If $a = b$ and $c = d$, then $a - c = b - d$.
5. Symmetric Property: If $a = b$, then $b = a$.

What are Some Postulates in Geometry?

1. Distributive Property:
 $(a)(b + c) = (a)(b) + (a)(c)$
2. Addition Property of Equality: If $a = b$ and $c = d$, then $a + c = b + d$.
3. Reflexive Property: $a = a$, anything is equal to itself
4. Subtraction Property of Equality: If $a = b$ and $c = d$, then $a - c = b - d$.
5. Symmetric Property: If $a = b$, then $b = a$.
6. Multiplication Property of Equality: If $a = b$, then $(a)(c) = (b)(c)$.

What are Some Theorems in Geometry?

What are Some Theorems in Geometry?

1. Vertical Angle Theorem: If two angles are vertical, then they are congruent.

What are Some Theorems in Geometry?

1. Vertical Angle Theorem: If two angles are vertical, then they are congruent.
2. Complement Theorem: If two angles are complement of the same (or congruent) angles, then they are congruent.

What are Some Theorems in Geometry?

1. Vertical Angle Theorem: If two angles are vertical, then they are congruent.
2. Complement Theorem: If two angles are complement of the same (or congruent) angles, then they are congruent.
3. Supplement Theorem: If two angles are supplement of the same (or congruent) angles, then they are congruent.

Thank you for watching.