

Quiz 3.1: Introduction to Mathematical System

Multiple Choice: Choose the letter that corresponds to the correct answer. Write the answer in your answer sheet.

1. Statements that are assumed to be true without proof are called:
A. Definition B. Law C. Postulate D. Theorem
2. The set of points consisting of the union of two rays with a common endpoint is called:
A. Angle B. Bisector C. Segment D. Vertex
3. A structure that consists of defined and undefined terms, axioms or postulates, and theorems is called:
A. Direct proof C. Law of Syllogism
B. Indirect proof D. Mathematical system
4. Terms that can only be explained using representations and/or descriptions are called:
A. Defined terms B. Mathematical terms C. Simplified terms D. Undefined terms
5. Perpendicular lines ____ form right angles.
A. always B. sometimes C. maybe D. never
6. Any three points not on the same line ____ determine a plane.
A. always B. sometimes C. maybe D. never
7. A line ____ has endpoints.
A. always B. sometimes C. maybe D. never
8. Two lines that are not parallel ____ intersect.
A. always B. sometimes C. maybe D. never
9. Which of the following objects represent a line?
A. Blackboard B. Ruler C. Scissors D. Tip of a pen
10. Which of the following objects represent a point?
A. Blackboard B. Ruler C. Scissors D. Tip of a pen
11. Which of the following objects represent a plane?
A. Blackboard B. Ruler C. Scissors D. Tip of a pen
12. Which of the following objects represent an angle?
A. Blackboard B. Ruler C. Scissors D. Tip of a pen
13. The following are characteristics of a line except:
A. Has infinite depth B. Has infinite length C. Has zero width D. Has zero height
14. The following are characteristics of a plane except:
A. Has zero thickness B. Has infinite length C. Has infinite width D. Has infinite height
15. The following are characteristics of a point except:
A. Has infinite thickness C. Has zero width
B. Has zero length D. Has zero height

Answer Key

1. Statements that are assumed to be true without proof are called:

Solution:

- A. Definition B. Law C. **Postulate** D. Theorem

2. The set of points consisting of the union of two rays with a common endpoint is called:

Solution:

- A. **Angle** B. Bisector C. Segment D. Vertex

3. A structure that consists of defined and undefined terms, axioms or postulates, and theorems is called:

Solution:

- A. Direct proof C. Law of Syllogism
B. Indirect proof D. **Mathematical system**

4. Terms that can only be explained using representations and/or descriptions are called:

Solution:

- A. Defined terms B. Mathematical terms C. Simplified terms D. **Undefined terms**

5. Perpendicular lines ____ form right angles.

Solution:

- A. **always** B. sometimes C. maybe D. never

6. Any three points not on the same line ____ determine a plane.

Solution:

- A. **always** B. sometimes C. maybe D. never

7. A line ____ has endpoints.

Solution:

- A. always B. sometimes C. maybe D. **never**

8. Two lines that are not parallel ____ intersect.

Solution:

- A. always B. **sometimes** C. maybe D. never

9. Which of the following objects represent a line?

Solution:

- A. Blackboard B. **Ruler** C. Scissors D. Tip of a pen

10. Which of the following objects represent a point?

Solution:

- A. Blackboard B. Ruler C. Scissors D. **Tip of a pen**

11. Which of the following objects represent a plane?

Solution:

- A. **Blackboard** B. Ruler C. Scissors D. Tip of a pen

12. Which of the following objects represent an angle?

Solution:

- A. Blackboard B. Ruler C. **Scissors** D. Tip of a pen

13. The following are characteristics of a line except:

Solution:

A. **Has infinite depth** B. Has infinite length C. Has zero width D. Has zero height

14. The following are characteristics of a plane except:

Solution:

A. Has zero thickness B. Has infinite length C. Has infinite width D. **Has infinite height**

15. The following are characteristics of a point except:

Solution:

A. Has infinite thickness	C. Has zero width
B. Has zero length	D. Has zero height