

INTERNATIONAL INDIAN SCHOOL

BURAIDAH

Worksheet For The Academic Year 2024-25

CLASS: IX SUBJECT: Mathematics DATE: 03/09/2024

LESSON-5 Introduction to Euclid's Geometry

- 1) In this lesson, Euclid's _____ no. of axioms and _____ no. of postulates are stated.
- 2) Euclid's fifth postulate explains the existence of _____ lines.
- 3) A solid has _____ dimensions, whereas a point has _____ dimension.
- 4) A line has _____ dimension, whereas a surface has _____ dimensions.
- 5) The boundaries of solids are _____ and the boundaries of surfaces are _____ or straight lines.
- 6) State Euclid's second axiom.
- 7) _____ no. of lines can be drawn through two distinct points.
- 8) Number of line segments required to form a closed figure is _____.
- 9) Two lines having a common point are called _____ lines.
- 10) If $\angle 1 = \angle 4$ and $\angle 2 = \angle 4$ then using which axiom can you say that $\angle 1 = \angle 2$.
- 11) Solve $x - 5 = 15$ using Euclid's axiom.
- 12) If a line XY has Z on it such that $XZ = YZ$ then show that $XZ = \frac{1}{2} XY$.
- 13) State any 2 of Euclid's postulates.
- 14) If Sonu and Monu are of same weight and each of them gain 5kg weight, How will you explain their new weight using Euclid's axiom.
- 15) In ΔPQR , X and Y are points on PQ and QR respectively. If $PQ = QR$ and $QX = QY$ show that $PX = RY$.
- 16) The existence of what does Euclid's fifth postulate state.
- 17) If $a + b = 10$ then which axiom of Euclid best illustrates that $a + b - c = 10 - c$.
- 18) How do we identify parallel lines?
- 19) What does a theorem require?
- 20) Postulates are statements related to _____.
- 21) Euclid stated that "Circles can be drawn with a centre and same radius" as a _____.
- 22) Axioms are universal _____ in all branches of mathematics.
- 23) Euclid divided his famous treatise into 'The Elements' consisting of _____ chapters.
- 24) Prove that an equilateral triangle can be constructed on any given line segment.
- 25) Euclid tries to explain facts in geometry in the simplest language.