

Ch-5 Euclid's Geometry

1. If a point R lies between two points P and Q such that $PR = QR$, then prove that $PR = \frac{1}{2} PQ$.
2. If B and C are two points between A and D such that $AC = BD$, then prove that $AB = CD$.
3. What is Euclid's fifth postulate?
4. How many dimension does a solid has?
5. What do you call a figure formed by three line segments?
6. What is a minimum number of lines required to make a closed figure?
7. Line PQ is such that it acts as a transversal for two non-parallel, non-intersecting lines AB and CD such that $\angle APQ + \angle PQC < 180$. So, lines AB and CD, if produced will intersect on the left of PQ. This is an example of which postulate of Euclid?
8. Prove that an equilateral triangle can be constructed on any given line segment.
9. How can you prove that two different lines can't have more than one point in common?
10. What is Euclid's second axiom?
11. What do you understand by a theorem?
12. If P, Q and R are three points on a line, and Q lies between P and R, then prove that $PQ + QR = PR$.
13. If B lies between A and C, $AC = 12\text{cm}$ and $BC = 9\text{cm}$, then what is AB ?
14. Define angle, vertex and congruent lines.
15. Given three collinear points A, B, C. Name all the line segments, enclosed.
16. If $AB = PQ$ and $PQ = XY$, then is $AB = XY$ too?
17. What is the measure of an angle which is 25° more than its complement?
18. If $AB = x + 3$, $BC = 2x$ and $AC = 4x - 5$, then what will be the measure of x, if B lies on AC?
19. Line segment $PQ = 12\text{cm}$ and R is a point on it, such that $PR = 8\text{cm}$. Then, find $PQ^2 - PR^2$.