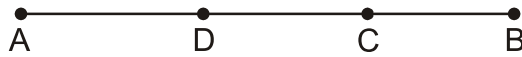
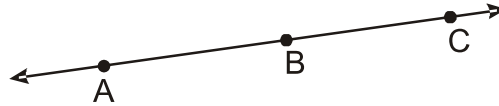


Very Very Short Answer Type Questions (1 Marks)

- Write the number of dimensions, that a surface contain.
- A proof is required for _____ (Postulate, Axioms, Theorem).
- The number of line segments determined by three collinear points is _____ (Two, three, only one).
- Euclid stated that if Equals are subtracted from Equal then the remainders are equal in the form of _____ (an axiom, a definition, a postulate).
- In given figure $AD = BC$ then AC and BD are equal or not?

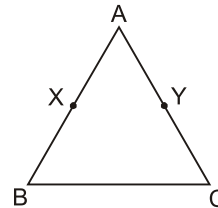


- How many lines can pass through a single point ?
- State Euclid's first postulate.
- Write Euclid's fifth postulate.
- If $a + b = 15$ and $a + b + c = 15 + c$
which axiom of Euclid does the statement illustrate?
- If A, B and C are three points on a line and B is between A and C then prove that $AC - BC = AB$.

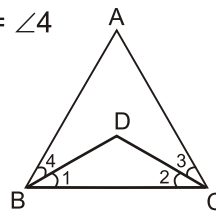


Very Short Answer Type Questions (2 Marks)

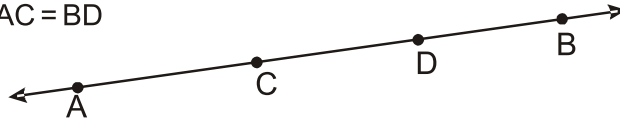
- If $x + y = 10$ and $x = z$ then show that $z + y = 10$
- In given figure $AX = AY$, $AB = AC$
Show that : $BX = CY$



- In given figure $\angle ABC = \angle ACB$ and $\angle 3 = \angle 4$
Show that $\angle 1 = \angle 2$



14. In the given figure of $AD = CB$
then prove that $AC = BD$



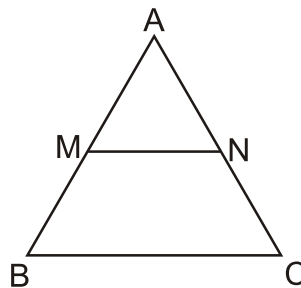
15. Solve the equation $x - 10 = 15$, State which axiom do you use here.
16. If a point C lies between two points A and B such that $AC = BC$ then prove that

$$AC = \frac{1}{2} AB$$

17. In the given figure

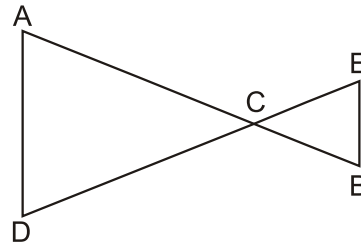
$$AM = \frac{1}{2} AB$$

$$AN = \frac{1}{2} AC$$

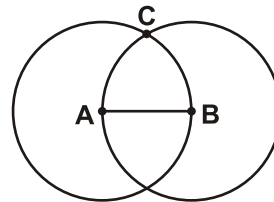


show that $AB = AC$

18. In the given figure $AC = DC$, $CB = CE$
then show that $AB = DE$

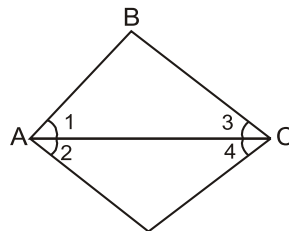


19. Prove that every line segment has one and only one mid point.
20. In fig, A and B are centres of the two intersecting circles, which intersect at C. Prove that $AB = AC = BC$



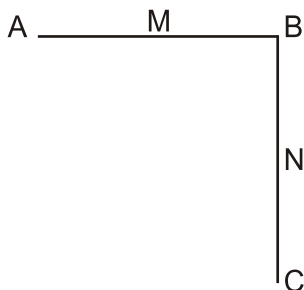
21. Kartik and Himank have the same weight. If they each gain weight by 3kg, how will their new weights be compared? state Euclid's axiom used?

Short Answer Type Questions (3 Marks)

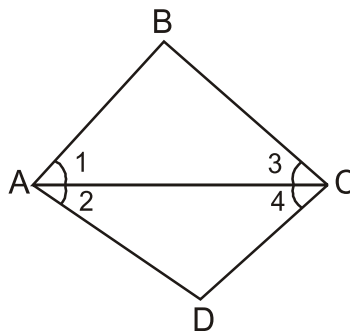


22. In the given figure $\angle 1 = \angle 2$ and $\angle 2 = \angle 3$
then show that $\angle 1 = \angle 3$

23. In the given figure $AB = BC$, M is the mid point of AB and N is the mid point of BC. Show that $AM = NC$



24. In the given figure $\angle 1 = \angle 3$ and $\angle 2 = \angle 4$
then show that $\angle BAD = \angle BCD$



25. An equilateral triangle is a polygon made up of three line segments out of which two line segments are equal to the third one and all the angles are 60° each.

Can you justify that all sides and all angles are equal in equilateral triangle?

26. RAM and Shyam are two students of Class IX. They give equal donation to a blind school in the month of March. In April each student double their donation.
- (a) compare their donation in April.
- (b) which mathematical concept have been covered in this question?

CHAPTER-5
INTRODUCTION TO EUCLID'S GEOMETRY

ANSWERS

- | | | |
|--|------------------|-------------|
| 1. Two | 2. Theorem | 3. Only One |
| 4. Axiom | 5. Equal | 6. Infinite |
| 9. Second axiom | 15. Second Axiom | |
| 26. (a) Donation amount is same in April | | |
| (b) Euclid's axiom | | |

CHAPTER-5
Introduction to Euclid's Geometry
Practice Paper

Time : 1 hr.

M.M. 25

1. Explain when a system of axioms is called consistent . (1)
2. How many line segments can be determined by three collinear points ?(1)
3. How many lines can pass through a given point ? (1)
4. Solve the equation $x+3=10$ and state Euclid's axiom used. (2)
5. State Euclid's first postulate (2)
6. In $\triangle ABC$, D and E are mid-points of the sides AC and BC respectively, such that $AD=CE$, show that $AC=BC$. (2)
7. If a point C lies between two points A and B such that $AC=BC$ then prove that $AC= \frac{1}{2} AB$. Explain by drawing the figure. (3)
8. It is known that if $x+y=10$, then $x+y+z=10+z$. State the Euclid's axiom that illustrates the statement. (3)
9. State Euclid's fifth postulate Explain it and compare it with version of parallel lines. (5)
10. In fig. $PQ=RS$, A and B are points on PQ and RS such that $AP= \frac{1}{3} PQ$ and $RB= \frac{1}{3} RS$ show that $AB=RB$. State which axiom you use here. Also give two more axioms other than the axiom used in above situation.

