



# INDIAN SCHOOL DARSAIT

## DEPARTMENT OF MATHEMATICS



Subject : Mathematics      Topic: Introduction to      Date of Worksheet : 22-8-2019  
 Worksheet No:5      Euclid 's Geometry  
 Resource Person: Sunitha Rajeev      Date : \_\_\_\_\_

Name of the Student : \_\_\_\_\_ Class & Division : IX .... Roll Number : \_\_\_\_

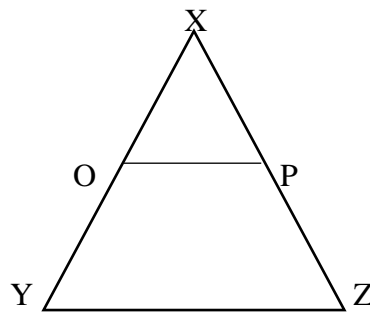
### Section A (Basic Skill)

**Marks**

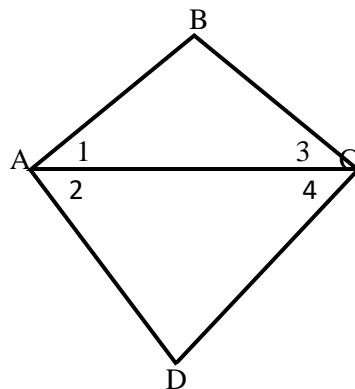
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|----|--|---|
| 1. | An angle is $25^\circ$ more than its complement. What is its measure?  | 1 |
| 2. | The measure of an angle is 3 times its supplement, then find the angles.   | 1 |
| 3. | Find the perimeter of a rectangle whose length and breadth are respectively 25 cm and 10cm.  | 1 |
| 4. | If QS lies between QP and QR. Given that $\angle PQR = 80^\circ$ and $\angle PQS = 35^\circ$ , determine the measure of $\angle RQS$ . | 1 |

### Section B

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|----|---|---|
| 1. | Prove that every line segment has one and only one midpoint.  | 2 |
| 2. | C is the midpoint of AB and D is the midpoint of AC. Prove that $AD = \frac{1}{4} AB$ .<br>Explain by drawing the figure.                 | 3 |
| 3. | 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 |
| 4. | In the given figure if $OX = \frac{1}{2} XY$ , $PX = \frac{1}{2} XZ$ and $OX = PX$ , show that $XY = XZ$ .                                | 3 |



- |    |  |   |
|----|--|---|
| 5. | In the given figure , we have $\angle 1 = \angle 3$ and $\angle 2 = \angle 4$ . Show that, $\angle A = \angle C$ . | 4 |
|----|--|---|



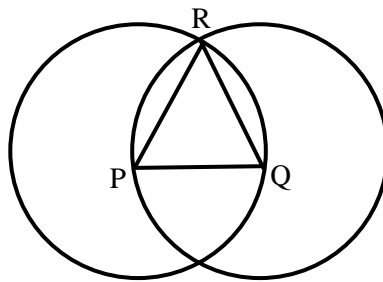


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6. P and Q are the centres of two intersecting circles. Prove that  $PQ = QR = PR$ .

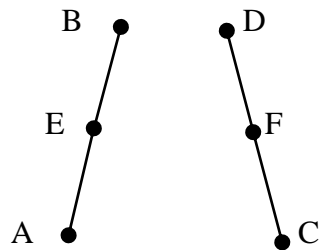
4



**Section C**

1. Solve the equation  $x - 15 = 25$  and state Euclid's axiom used here. 2

2. In figure,  $AE = DF$ , E is the midpoint of AB and F is the midpoint of DC. Using an Euclid's axiom, show that  $AB = DC$ . 3



3. In the given figure, we have  $\angle ABC = \angle ACB$ ,  $\angle 3 = \angle 4$ . Show that  $\angle 1 = \angle 2$ . 4

