

8/Aug

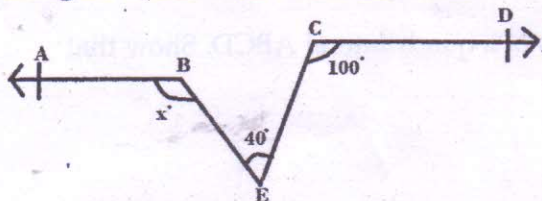
CLASS :- IX

TIME ALLOWED: - 1 HR.

GENERAL INSTRUCTIONS:-

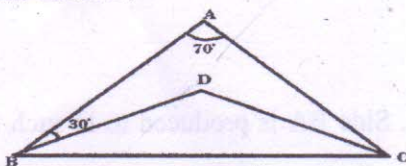
1. All the questions are compulsory
2. Question number 1 to 2 carry 1 mark each
3. Question number 3 to 4 carry 2 mark each
4. Question number 5 to 10 carry 4 mark each

1 In figure-1, $AB \parallel CD$. Find the value of x .



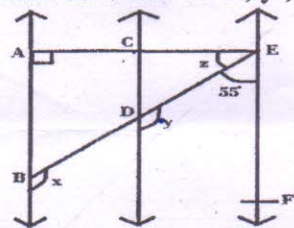
1

2 In figure-2, BD and CD are the bisectors of $\angle B$ and $\angle C$ respectively. If $\angle BAC = 70^\circ$ and $\angle ABD = 30^\circ$, determine $\angle BDC$.



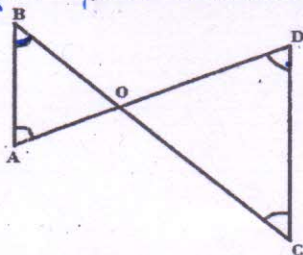
1

3 In figure-3, $AB \parallel CD$ and $CD \parallel EF$. Also EA is perpendicular to AB. If $\angle BEF = 55^\circ$, find the value of x, y, z .



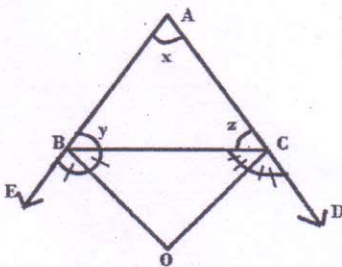
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4 In figure - 4, $\angle B < \angle A$ and $\angle C < \angle D$. Show that $AD < BC$.



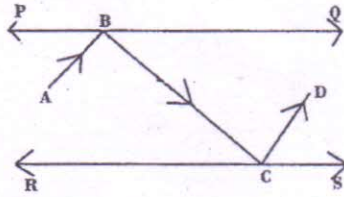
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5 In figure-5, the sides AB and AC of ΔABC are produced to points E and D respectively. If bisectors BO and CO of $\angle CBE$ and $\angle BCD$ respectively meet at point O, then prove that $\angle BOC = 90^\circ - \frac{1}{2} \angle BAC$.



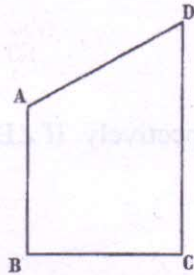
4

6 In figure- 6, PQ and RS are two mirrors placed parallel to each other. An incident ray AB strikes the mirror PQ at B, the reflected ray moves along the path BC and strikes the mirror RS at C and again reflects back along CD. Prove that $AB \perp CD$.

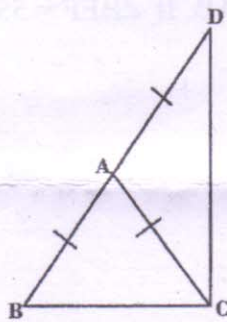


7 In $\triangle ABC$, if $3 \angle A = 4 \angle B = 6 \angle C$, calculate $\angle A$, $\angle B$ and $\angle C$.

8 AB and CD are respectively the smallest and longest sides of a quadrilateral ABCD. Show that $\angle A > \angle C$.



9 $\triangle ABC$ is an isosceles triangles in which $AB = AC$. Side BA is produced to D such that $AD = AB$ (see in figure). Show that $\angle BCD$ is a right angle.



10 In a triangle, the side opposite to larger angle is longer.