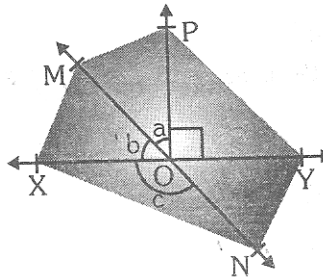


ACHIEVERS FOUNDATION

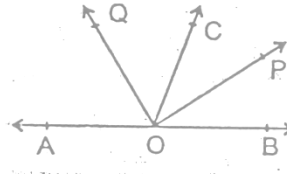
LINE AND ANGLES AND TRIANGLE

Total Time – 60 min
Total Marks – 30

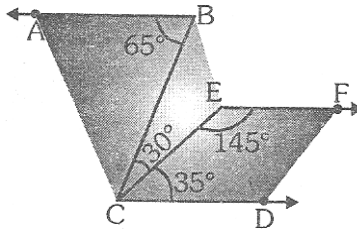
- 1) In figure, lines XY and MN intersect at O . If $\angle POY = 90^\circ$ and $a : b = 2 : 3$, find c . 2



- 2) In figure, OP and OQ bisect $\angle BOC$ and $\angle AOC$ respectively. Prove that $\angle POQ = 90^\circ$. 3



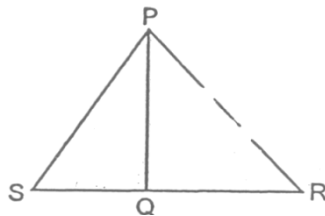
- 3) In figure, $\angle ABC = 65^\circ$, $\angle BCE = 30^\circ$, $\angle DCE = 35^\circ$ and $\angle CEF = 145^\circ$. Prove that $AB \parallel EF$. 3



- 4) Angles opposite to equal sides of an isosceles triangle are equal. 4

- 5) If D is the mid-point of the hypotenuse AC of a right triangle ABC , prove that $BD = \frac{1}{2} AC$. 4

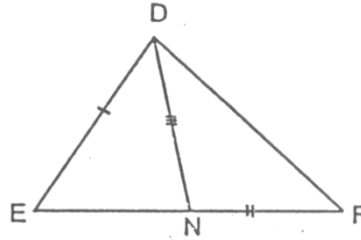
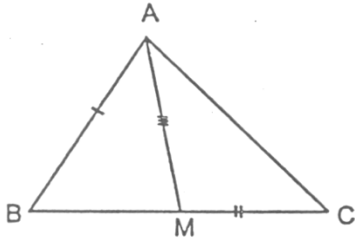
- 6) In figure, $PQ = PR$, show that $PS > PQ$ 4



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7) Show that a median of a triangle divides it into two triangles of equal area. 4

8) In figure, two sides AB and BC and the median AM of a ΔABC are respectively equal to sides DE and EF and the median DN of ΔDEF . Prove that $\Delta ABC \cong \Delta DEF$. 4



9) In figure if $l \parallel m$, $n \parallel p$ and $\angle 1 = 85^\circ$ find $\angle 2$ 2

