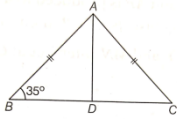
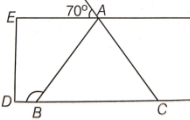


Chapter- Triangles

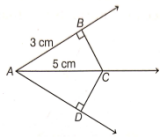
- In $\triangle ABC$ if $A=45^\circ$, $B=70^\circ$ then shortest side is
 a) AB b) BC c) CA d) None of these
- ABC is an isosceles triangle such that $AB=BC$ and AD is the median to the base BC. Then, $\angle BAD$ is equal to



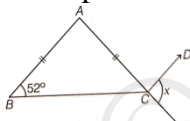
- a) 55° b) 70° c) 35° d) 110°
- In the given figure, if $AE \parallel DC$ and $AB=AC$, the value of $\angle ABD$ is



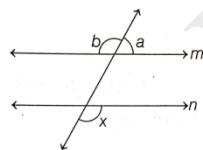
- a) 70° b) 110° c) 120° d) 130°
- In the given figure, if AC is bisector of $\angle BAD$ such that $AB=3\text{cm}$ and $AC=5\text{cm}$, then CD is equal to



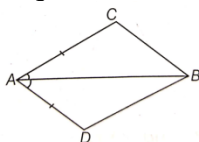
- a) 2cm b) 3cm c) 4cm d) 5cm
- In the given figure, ABC is an isosceles triangle whose side AC is produced to E. through C, CD is drawn parallel to BA. The value of x is



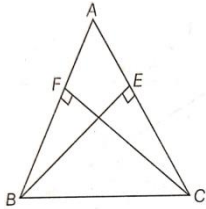
- a) 52° b) 76° c) 156° d) 104°
- Is it possible to construct a triangle with lengths of its sides as 8cm, 7cm and 4cm? Give reason for your answer.
- In the given figure, if $m \parallel n$ and $a:b=2:3$, then what will be the measure of x?



- In quadrilateral ABCD, $AC=AD$ and AB bisects $\angle A$. show that $\triangle ABC \cong \triangle ABD$



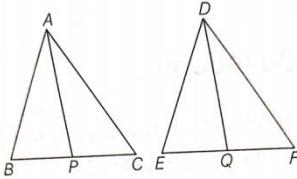
- The statement “An exterior angle of a triangle is less than either of its interior opposite angles”, is true or false?
- ABC is an isosceles triangle in which altitudes BE and CF are drawn to equal sides AC and AB, respectively. Show that these altitudes are equal.



11. In the given figure, if $PQ > PR$ and QS, RS are the bisectors of Q, R respectively. Then prove that $SQ > SR$.



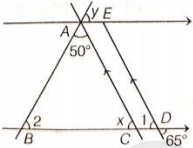
12. In the given figure, $AB=DE, BC=EF$ and median $AP=$ median DQ . Prove that $\angle B=\angle E$



13. In PQR , if $P=100^\circ$, PM bisects P and PM is perpendicular QR , then find Q .

14. In $ABC \cong PQR$ and $AB=4\text{cm}, B=90^\circ, BC=3\text{cm}, PQ=4\text{cm}$ and $Q=90^\circ$. Then write the information which is left out.

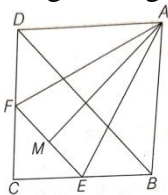
15. In the given figure, $AE \parallel BD$ and $CA \parallel DE$. Find the measures of x and y .



16. In the given figure, $X=62^\circ$ and $XYZ=54^\circ$. If YO and ZO are the bisectors of XYZ and XZY , respectively of XYZ . Then find the value of $\angle OZY$ and $\angle YOZ$.

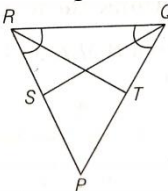


17. It is given figure, $ABCD$ is a square and EF is parallel to diagonal BD and $EM=FM$. Prove that



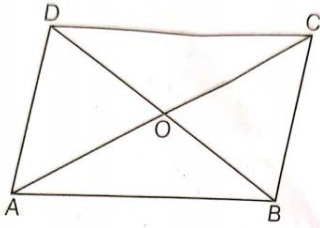
- a) $DF=BE$ b) AM bisects BAD .

18. In the given figure, $RS=QT$ and $QS=RT$. Prove that $PQ=PR$

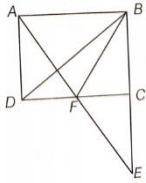


19. ABC is a triangle in which $B=2C$. D is a point on side BC such that AD bisects BAC and $AB=CD$. Prove that $\angle BAC=72^\circ$

20. In the given figure, diagonals AC and BD of quadrilateral ABCD intersect at O such that $OB=OD$. If $AD=BC$, then show that a) $\text{ar}(AOD)=\text{ar}(BOC)$ b) $\text{ar}(ABD)=\text{ar}(ABC)$ c) $DA\parallel CB$ or ABCD is a parallelogram.



21. Two triangles having equal areas and having one side of the triangle equal to one side of the other have their corresponding altitudes equal. Prove that altitudes of both triangles are equal.
22. ABC is an isosceles triangle in which $AB=AC$. D, E and F are the mid-points of the sides BC, AC and AB, respectively. Prove that $DE=DF$.
23. ABCD is a parallelogram in which BC is produced to E such that $CE=BC$. AE intersects CD at F. if $\text{ar}(DFB)=3\text{cm}^2$, then find the area of the parallelogram ABCD.



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