



INDIAN SCHOOL NIZWA - WORKSHEET

MATHEMATICS

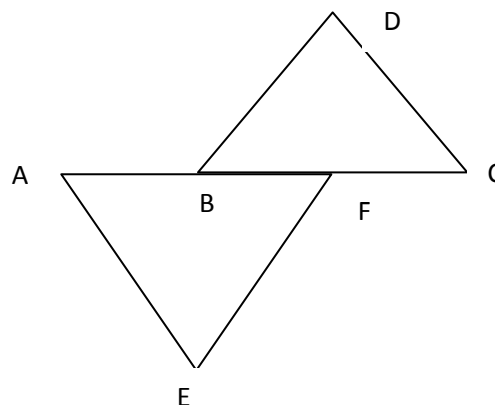
CH:7 Triangles

Name: _____

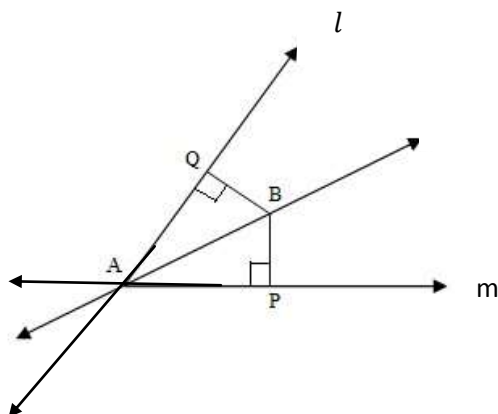
Date: _____

Class: IX Sec: ____

1. In the given figure, if $AB=CF$, $EF=BD$ and $\angle AFE=\angle CBD$ then prove that $\triangle AFE \cong \triangle CBD$.



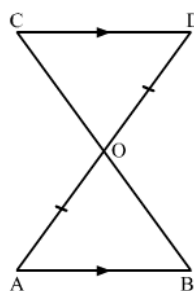
2. B is a point equidistant from two lines l and m intersecting at point A . Show that the line AB bisects the angle between them.



3. If $OA=OD$ and $OC=OB$. Show that

i) $\triangle AOB \cong \triangle DOC$

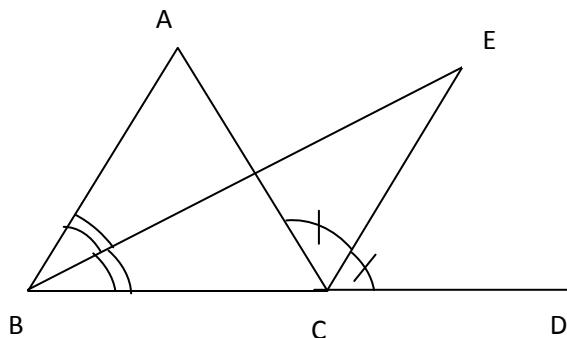
ii) $AD \parallel BC$





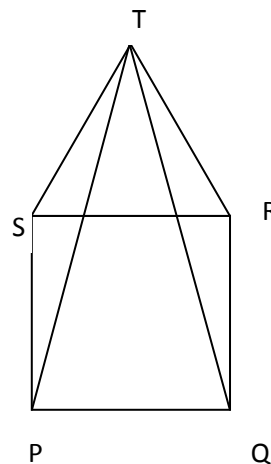
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4. ABC is a triangle with BC produced to D. Also bisectors of $\angle ABC$ and $\angle ACD$ meet at E. Show that $\angle BEC = \frac{1}{2} \angle BAC$.



5. PQRS is a square and SRT is an equilateral triangle, prove that

- i) $PT=QT$
- ii) $\angle TQR=15^\circ$



6. In $\triangle ABC$, $\angle A=65^\circ$ and $\angle C=35^\circ$. Which side of this triangle is the longest? Give reason for your answer.
7. O is a point in the interior of a square ABCD such that OAB is an equilateral triangle. Show that $\triangle OCD$ is an isosceles triangle.

