## Triangles-Assignment

## freeclasses.weebly.com

## Send your problem --->>>

Q.1: ' $D$ ' is mid point of AB (see Fig. below). Prove that: $\triangle \mathrm{ADC} \cong \triangle \mathrm{BDC}$ if $\angle \mathrm{A}=\angle \mathrm{B}$.

Q.2: AB is a line segment and line $l$ is its perpendicular bisector. If a point $P$ lies on $l$, show that $P$ is equidistant from $A$ and $B$.
Q.3: Line-segment $A B$ is parallel to another line-segment CD. $O$ is the mid-point of AD (see Fig. below). Show that
(i) $\triangle \mathrm{AOB} \cong \triangle \mathrm{DOC}$
(ii) $O$ is also the mid-point of BC.
(iii)Show that EF is also parallel to AB and CD if $\angle \mathrm{A}+\angle \mathrm{Q}=\angle \mathrm{D}+\angle \mathrm{P}=\mathbf{1 8 0}^{\circ}$

Q.4: In quadrilateral $\mathrm{ACBD}, \mathrm{AC}=\mathrm{AD}$ and AB bisects $\angle \mathrm{A}$ (see Fig. Given below). Show that $\triangle A B C \cong \triangle A B D$ and $\triangle A O C \cong \triangle A O D$.
What can you say about $B C$ and $B D$ ?

Q.5: $P$ and $Q$ are the mid points on the sides $C A$ and $C B$ respectively of triangle $A B C$ right angled at C . Prove that $4\left(A Q^{2}+B P^{2}\right)=5 A B^{2}$
Q.6:In $\triangle A B C, B D$ is the perpendicular bisector of CA (see the given figure). Show that $\triangle A B C$ is an isosceles triangle in which $B C=B A$.

Q.7: AB is a line-segment. P and Q are points on opposite sides of AB such that each of them is equidistant from the points A and B . Show that the line PQ is the perpendicular bisector of AB .
Q.8: $D$ is a point on side $B C$ of $\triangle A B C$ such that $A D=A C$. Show that $A B>A D$.

Rest you do from your NCERT Books.

For any further query:
contact me through e-mail- skdwivedi2009@gmail.com
for more visit: freeclasses.weebly.com

