Mathematics

Chapter 6: The Triangle and its Properties, Class 3

## CLASS NOTES-ANSWERS

## EXERCISE 6.1

1. In $\triangle P Q R, D$ is the mid-point of $Q R$.

PM is $\qquad$ .

PD is $\qquad$ .

Is $\mathrm{QM}=\mathrm{MR}$ ?


## Answer:

Given, PM is perpendicular to QR. Therefore, PM is altitude.
Also, $D$ is the mid-point of $Q R . Q D=D R$
$P D$ is median.
No, $\mathrm{QM} \neq \mathrm{MR}$, because D is the mid-point of QR .
2. Draw rough sketches for the following:
(a) In $\triangle A B C, B E$ is a median.
(b) In $\triangle P Q R, P Q$ and $P R$ are altitudes of the triangle.
(c) $\operatorname{In} \triangle X Y Z, Y L$ is an altitude in the exterior of the triangle.

Answer:

3. Verify by drawing a diagram if the median and altitude of an isosceles triangle can be same.

## Answer:

Draw a $\triangle A B C$ and then draw a line segment $A D$ perpendicular to $B C$. $A D$ is an Altitude of the triangle. It can be observed that length of BD and DC is also same. Therefore, $A D$ is also a median of this triangle.


