Q.No.	DAY - 38
219	**EXERCISE 6.1** 1. Prove by vector method that if a line is drawn from the centre of a circle to the midpoint of a chord, then the line is perpendicular to the chord.
220	3. Prove by vector method that an angle in a semi-circle is a right angle.
221	6. Prove by vector method that the area of the quadrilateral $ABCD$ having diagonals AC and BD is $\dfrac{1}{2}\lvert \overrightarrow{AC} \times \overrightarrow{BD} \rvert$.
222	8. If G is the centroid of a ΔABC, prove that (area of ΔGAB) = (area of ΔGBC) = (area of ΔGCA) $= \dfrac{1}{3}$ (area of ΔABC).
223	14. Find the torque of the resultant of the three forces represented by $-3\hat{i} + 6\hat{j} - 3\hat{k}$, $4\hat{i} - 10\hat{j} + 12\hat{k}$ and $4\hat{i} + 7\hat{j}$ acting at the point with position vector $8\hat{i} - 6\hat{j} - 4\hat{k}$ about the point with position vector $18\hat{i} + 3\hat{j} - 9\hat{k}$.