

### Answer on Question #41434 – Physics - Mechanics | Kinematics | Dynamics

The motion of a rigid object for which all its constituent particles undergo the same kind of displacement is referred to as ----- motion

- oscillatory
- translational
- random
- rotational

#### **Solution:**

«If a body is moved from one position to another, and if the lines joining the initial and final points **of each of the points of the body** are a set of parallel straight lines of length  $\ell$ , so that the orientation of the body in space is **unaltered**, the displacement is called a translation parallel to the direction of the lines, through a distance  $\ell$ »

— E.T. Whittaker: A Treatise on the Analytical Dynamics of Particles and Rigid Bodies, p. 1

Thus, the correct answer is translational.

**Answer:** translational

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