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| **Acceleration:** A change in velocity over time.  **Average Speed:** The total distance traveled divided by the total time for a given trip.  **Average Velocity:** The total displacement traveled divided by the total time for a given trip.  **Dimension:** The x, y, or z plane.  **Direction:** A description that may include North, South, East, West, positive, negative, up, down, left, or right.  **Distance:** A measure of space between two points.  **Displacement:** A change in position.  **Equation:** A statement that the values of two mathematical expressions are equal.  **Free Fall:** The acceleration of a falling object due to Earth’s gravity and in the absence of air resistance.  **Horizontal:** Parallel to the horizon or ground.  **Instantaneous Speed:** Describes an objects speed at one moment in time or at one specific point in the object’s path. | **Instantaneous Velocity:** Describes an objects speed at one moment in time or at one specific point in the object’s path.  **Kinematic:** Of or related to motion.  **Magnitude:** A quantity’s size or amount without regard to its direction or other factors.  **Motion:** The action or process of moving or being moved.  **One-Dimensional:** Moving in either the x or y dimension.  **Quantity:** The amount of something.  **Scalar:** A quantity that is completely described by its magnitude and measurement units.  **Speed:** The rate at which an objects distance changes over time.  **Vector:** A quantity that includes both magnitude and direction.  **Velocity:** Describes an object’s change of position over time.  **Vertical:** Perpendicular to the horizon or ground. |