

ENGLISH-CHINESE
ILLUSTRATED
SCIENCE
DICTIONARY

英汉对照科技图解词典

外语教学与研究出版社

English—Chinese Illustrated
Science Dictionary

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〔英〕阿·古德曼原著

郑博文 曲毓琦译

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YINGHAN DUIZHAO KEJI TUJIE CIDIAN

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10 · PROPERTIES OF MATTER/MEASUREMENT

device (*n*) an object made for a special purpose to help us in our work.

tool (*n*) a device which is used with our hands to make furniture, machines, to build houses, to dig the ground.

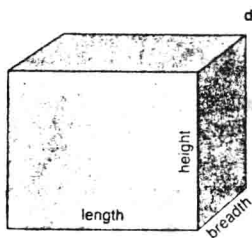
instrument (*n*) a device which is used to do skilful work, or to measure accurately (↓).

dimension (*n*) the dimensions of a solid are its length, its breadth, and its height. Liquids and gases do not have dimensions. A solid has three dimensions; a flat surface has two dimensions (length and breadth) and a line has one dimension (length).

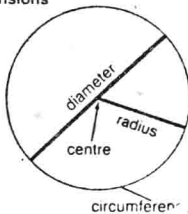
circumference (*n*) the line which forms a circle or is the limit of any area.

radius (*n*) the distance between the centre of a circle and its circumference or the centre of a sphere and its surface, *see diagram*.

diameter (*n*) a straight line passing from side to side through the centre of a circle or sphere, or the length of that line.



dimensions



volume (*n*) the amount of space taken up by an object in three dimensions.

measurement (*n*) the result of measuring or the action of measuring, e.g. (1) if a rope is measured and it is 2.5 m long, then its measurement is 2.5 m; (2) a ruler was used for the measurement of the rope.

accurate (*adj*) describes a measurement that is free from mistakes, e.g. using one instrument, an object's length is 26 mm. Using another instrument, the object's length is 26.2 mm; this is a more accurate measurement. **accuracy** (*n*).



clock

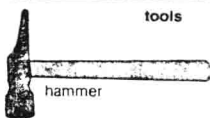
devices



telephone



compass



hammer

tools



spanner

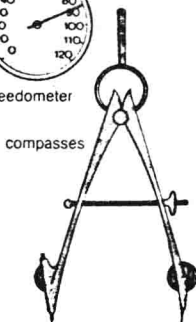


screwdriver



speedometer

instruments



compasses

device 装置 为了帮助人们工作而专门制造的器件。

tool 工具 用于手工制造家具, 机器, 建房, 挖地的器件。

instrument 仪器 用来做技术性工作或进行准确性测量的器件。

dimension 维(数) 一个固体物质的维(数)就是它的长度、宽度和高度。液体和气体物质没有维(数)。固体物质有三维(数); 平面物质有二维(长度和宽度); 而线有一维(长度)。

circumference 圆周(线), 周界 形成一个圆的线或作为任何面积的界限。

radius 半径 圆心到圆周之间的距离, 或球心到球表面的距离。(见图)

diameter 直径 从圆或球的一边通过圆心或球心到另一边的直线或该直线的长度。

volume 体积 三维物质所占据的空间量。

measurement 测量, 度量 测量的结果或测量的动作, 例如 (1) 假设测量一条绳子, 其长度为 2.5 米, 那么它的度量就是 2.5 米; (2) 用来测量绳子的一把尺子。

accurate 精确的 无误地描述一个量度, 例如用一台仪器测得一物体的长度为 26 毫米, 而用另一台仪器测得该物体为 26.2 毫米; 这就是更加精确的测量。

scale 刻度尺(计) 一组刻度,带有从低值到高值的数字。

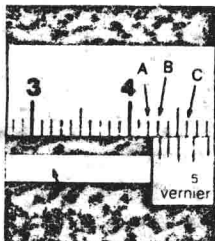
vernier 游标尺 用于进行精确测量的仪器的一部分,例如测量小到 0.1 毫米的长度。游标尺沿千分尺的主尺移动。图中游标尺指在 4.24 厘米或 42.4 毫米处。

travel 运行 从一个地方移动到另一个地方;沿着轨道运行,例如地球环绕太阳运行;汽车从一个城镇驶到另一个城镇。

motion 运动 移动;行走的动作;从一个地方走到另一个地方,例如地球在围绕着太阳运动;汽车行驶就是处于运动中。运动不是以直线进行就是以曲线进行。

speed 速度 走过的距离除以走过该距离所需的时间。如果一辆汽车半小时行驶 35 公里,其速度为每小时 70 公里。汽车可沿直线,也可沿曲线运行。

velocity 速度(率) 朝着一定方向的速度。沿着笔直的公路以 70 公里 / 小时的速度行驶的汽车也具有 70 公里 / 小时的速度。以 70 公里 / 小时绕着公路上的拐弯处行驶的汽车具有不断变化着的速度;因为公路不是笔直的。



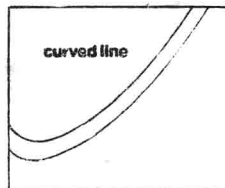
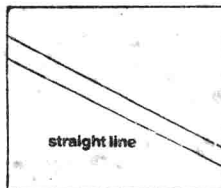
The 0 mark of the vernier is between lines A and B. At C a unit of the main scale meets the unit 4 of the vernier scale exactly showing that the rod is 4.24 cm or 42.4 mm.

scale (*n*) a set of marks, with numbers, rising from a low value to a high value.

vernier (*n*) part of an instrument used for measuring accurately, e.g. length to 0.1 mm. The vernier moves along a main scale. In the diagram the vernier reads 4.24 cm or 42.4 mm.

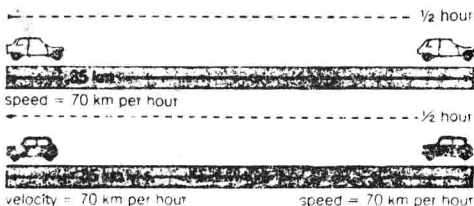
travel (*v*) to go from one place to another place; to go along a path, e.g. the Earth travels round the sun; a motor-car travels from one town to another town.

motion (*n*) movement; the action of travelling; going from one place to another place, e.g. the Earth is in motion round the sun; a motor car is in motion when it is travelling. Motion is either in a straight line or in a curved line.



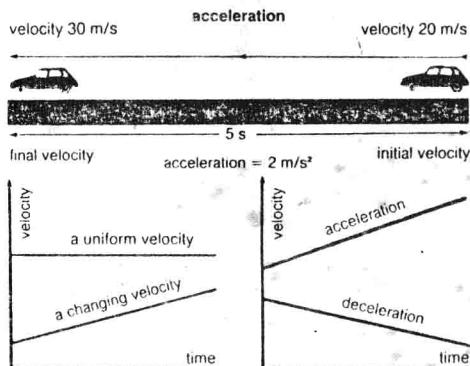
speed (*n*) the distance travelled divided by the time taken to travel the distance. If a motor-car travels 35 km in half an hour, its speed is 70 km per hour. The motion of the motor-car can be along a straight line or along a curved line.

velocity (*n*) speed in a certain direction. A motor-car travelling along a straight road with a speed of 70 km/hour also has a velocity of 70 km/hour. A motor-car travelling at 70 km/hour round a bend in a road has a velocity that is continuously changing as the road is not in a straight line.



12 · PROPERTIES OF MATTER/MEASUREMENT

acceleration (*n*) the increase in velocity per unit time, i.e. the increase in velocity divided by the time taken to increase it. If the velocity of a motor-car increases from 20 metres per second (m/s) to 30 m/s in 5 seconds, then the acceleration = (increase in velocity) $\div$ (time) = $(30 - 20) \text{ m/s} \div 5 \text{ s} = 10 \text{ m/s} \div 5 \text{ s} = 2 \text{ m/s}^2$ (metres per second per second) **accelerator** (*n*), **accelerate** (*v*), **accelerated**, **accelerating** (*adj*).



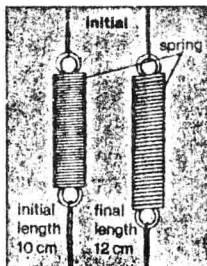
deceleration (*n*) the rate of decrease in velocity. Deceleration is negative acceleration.

decelerate (*v*).

rest (*n*) a state of not being in motion, e.g. a motor-car is either at rest, or it is travelling (in motion).

initial (*adj*) describes a speed, a velocity, an acceleration, or any measurement that is the first to be considered, e.g. the initial length of a spring is 10 cm. The spring is stretched and its final length is 12 cm.

uniform (*adj*) describes a speed, or a velocity, or an acceleration, that does not change with time; or also any shape, or colour, or appearance, or measurement that is the same over the whole of an object, e.g. a water-pipe of uniform diameter (p. 10) has the same diameter along the whole of its length.



acceleration 加速度 一个单位时间内增加的速度,即增加的速度除以增加速度所需的时间。假设一辆汽车的速度在5秒钟内以每秒20米(米/秒)增加到30米/秒,那么加速度 = (增加的速度) ÷ (时间) = $(30-20) \text{ 米/秒} \div 5 \text{ 秒} = 10 \text{ 米/秒} \div 5 \text{ 秒} = 2 \text{ 米/秒}^2$ (每秒每秒米)。accelerator 加速器, accelerate 加速, accelerated, accelerating (被)加速的。

deceleration 减速(度) 速度减低率。减速是负的加速度。decelerate 减(缓)速(度)。

rest 静止 不是处于运动状态,例如:一辆汽车或处于静止状态,或正在行驶(处于运动状态)。

initial (最、起)初的 描述最初考虑到的速度、速率、加速度或任何量度,例如:一根弹簧的最初长度为10厘米,弹簧被拉长后其最终长度为12厘米。

uniform 均匀的 描述一个不随时间变化的速度或速率,或加速度;或者是任何一种形状、颜色、外观或者度量,它们在整个物体上都是一样的,例如:一条直径均匀的水管,它的全部长度的直径(10页)都是一样的。