

Introduction to Scale 比例入门

Understanding scale measurements is an important aspect of geography. The definition of scale according to the dictionary is:

比例是地理中非常重要的一部分，在字典里比例的定义如下：

*With a uniform reduction or enlargement.
In proportion to the surroundings (of a drawing or model):
Example: It is hard to build models to scale from a drawing.*

统一的缩小或放大
图中图形与其实实际相应图形的线性尺寸之比
例句：很难根据图片按比例制作模型。

Scale is easy to calculate using the metric measuring system. Metric measurements are used by most countries around the world. The Metric System is very easy to use. As you move up and down the scale you simply move the decimal place.

用公制测量单位来计算比例是非常简单的。很多国家都是有公制测量。公制测量单位很好使用，当你想增大或减小比例只要变动一下小数位就行了。

Look at the Measurement scale for the Metric measuring systems. The 4 most commonly used measurements are shown in **RED**.

看下列公制测量单位，四个最常用的已经用**红色**标注出来。

Metric Measurements 公制计量单位

Kilometer	<i>/'kiləʊ'mi:tə/</i>	qiān mǐ	千米	1,000
Hectometer	<i>/'hektə'mi:tə/</i>	bǎi mǐ	百米	100
Decameter	<i>/'dekə'mi:tə/</i>	shí mǐ	十米	10
Meter	<i>/'mi:tə/</i>	mǐ	米	1
Decimeter	<i>/'desə'mi:tə/</i>	fēn mǐ	分米	0.1
Centimeter	<i>/'sentɪ'mi:tə/</i>	lí mǐ	厘米	0.01
Millimeter	<i>/'milə'mi:tə/</i>	háo mǐ	毫米	0.001
Micrometer	<i>/maɪ'krɒmɪtə/</i>	wēi mǐ	微米	0.000,001
Nanometer	<i>/nænəʊ'mi:tə/</i>	nà mǐ	纳米	0.000,000,001

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Determining Scale 计算比例

The formula for determining scale is simple. However remember that you might need to convert numbers to the same unit of measurement. Converting Metric Units of measurements only requires moving the decimal place, where converting Imperial units will be more complicated.

确定比例的公式非常的简单，但是要注意单位的统一。公制测量单位只需移动小数点位置就可以了，而英制测量单位则要复杂多了。

to calculate scale you must know the following:

在计算比例时需了解以下：

S = Scale 比例
AS = Actual Size 实际大小
MS = Model Size 模型大小

Scale = Actual Size / Model Size
比例 = 实际大小 / 模型大小

Example 例

A model car that you bought is 20cm long. The car is 3 meters long in real life. What is the correct scale of the car model?

你购买的模型车长20cm，而该车的实际长度是3m,那么该模型车的比例是多少？

Step 1: Covert meters to centimeters

第一步：把米转化成厘米

3 meters = 300 centimeters

3米 = 300厘米

Step 2: Calculate scale

第二步：计算比例

Scale 比例 = 300 / 20

Scale 比例 = 15

Therefore 1 centimetre on the model is equivalent to 15 centimetres on the real car. This is also written as a scale of 1/15

所以该模型的1厘米相当于实际的15厘米，该比例写为1/15。