

# PROPORTIONAL DIVIDER

Proportional Dividers are among the most versatile of modern drafting aids with a wide range of useful applications. The instruments can be used in the copying of drawings on a reduced or enlarged scale, in

dividing lines and circles into equal parts, in speedy and accurate solving of difficult measurement problems, in calculating distances on maps without scales, and in many other tasks.

## INSTRUCTIONS FOR USE

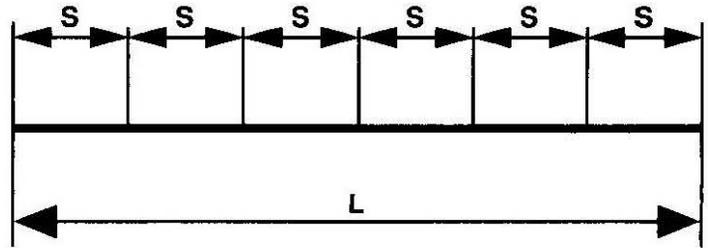
### A. Dividing a given length into a number of equal parts

Close legs of divider until they are perfectly aligned. Loosen knurled nut and set black mark on slide to the number of divisions required on the scale marked "Lines". Tighten nut and separate legs gently until the distance between the long points represents the total length to be divided. The distance between the short points then equals the required fraction.

S = distance between short points

L = distance between long points

Setting: 6 on linear scale



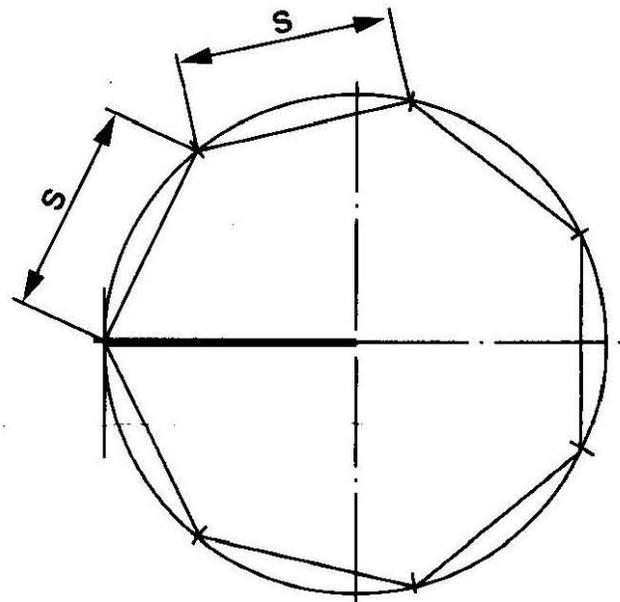
### B. Dividing the circumference of a circle into equal parts.

Loosen knurled nut as above. Set black mark on slide to the number of divisions required on the scale marked "circles". Tighten nut and separate legs gently until the distance between the long points represents the radius of the circle. The distance between the short points transferred to the circumference divides the circle into the required segments. By drawing lines between adjacent dividing marks a polygon can be constructed.

S = distance between short points

L = distance between long points

Setting: 7 on circle scale



### C. Constructing an angle

Before the proportional divider can be used in this way, a small calculation is necessary. Say an angle of  $20^\circ$  has to be drawn. Divide  $360$  by  $20 = 18$ . This becomes the setting on the "circle" side of the proportional divider. If then used as under "B", the centre angle is  $20^\circ$ .

S = distance between short points

L = distance between long points

Setting: 18 on circle scale

