

INSTRUMENTS.

In the pages that succeed, the following instruments are essential :

1. A ruler or straight-edge,

on which are marked inches divided into sixteenths, and on which also is a scale giving millimetres.

This is used for drawing straight lines ; for making them of any required length ; and for measuring straight lines that are drawn.

2. A pair of compasses,

one leg of which is furnished with a pencil.

This is used for describing circles ; also, with the help of the ruler, for laying off required distances ; and for measuring distances that are laid off.

3. A protractor.

This is used for constructing angles of any given number of degrees ; and for measuring the number of degrees in any given angle. It may also be used for determining whether one angle is greater than, equal to, or less than another.

For the more rapid and more accurate construction of figures, the following instruments are also desirable :

4. A pair of dividers,

both the legs of which terminate in fine points. These more accurately than the compasses will enable the pupil to measure and to transfer distances.

5. A set-square.

The right angle has very frequently to be constructed, and its construction can be more rapidly effected with the set-square than with the protractor.