How to Measure in Imperial British Units

The British Imperial system uses inches and fractions of an inch. The metric system, which uses meters and divisions of the meter, will not be discussed here. Many rulers will have Imperial units along one edge and metric units along the other. When measuring, please be careful to use the correct system.

Most Imperial rulers are divided into inches and fractions of an inch. The numbers next to the longest lines indicate the number of inches from the starting edge, usually the left edge. The longest line between any two numbered lines indicates the halfway point between those numbers, and is typically described as the half inch. Subsequent lines of diminishing length indicate the quarter inch and eighth of an inch. Many rulers will indicate what the smallest possible unit of measurement.

Some rulers will have smaller lines at smaller intervals (sixteenth, thirty-second), but most rulers are accurate to the eighth of an inch, and it is usually the level of precision which the conservation department needs. To this end, we ask for measurements to the nearest eighth of an inch.

When measuring, first be aware of where the measuring lines on the ruler start. Most rulers treat the left edge as the beginning. Some rulers, however, will have an initial line set in from the left edge the same length as the inch indicator lines which acts as a “0” inch line.

To measure the distance between two points, align the starting line - whether an actual line or the edge of the ruler - with the first of the two points. Line up the ruler so that the both the first and second point are against the measuring edge of the ruler. Double check to make sure that the first point is against the edge of the ruler and at the starting line. Find the second point along the edge of the ruler, and note how many numbered inch lines are between the two points. (Image at right shows measurement of three inches- 3”).
Find the fraction of an inch from the nearest previous numbered inch line. (Image at right shows measurement of three and one eighth inches - 3 \(\frac{1}{8}\)).

If there is difficulty finding the fractional measurement, start with the value of the smallest fractional lines of the ruler you are using. Then count the lines from the nearest previous numbered inch line to the second point. Then, simplify the fraction and note this as your measurement. (Image at right shows measurement of three and six eighths inches, or three and three quarters - 3 \(\frac{3}{4}\)).

Finally, be aware that for especially fine measurements (at the scale of 32nds of an inch), pencil marks have a thickness. The same two marks will yield slightly different measurements if the measurement is taken from the left side of one mark to the left, right or the middle of the second mark. Pick one (we prefer the left side of the pencil mark for uniformity) and use it consistently, for example always measuring from the left side of a mark to the left side of the second mark.