

Length units in T_EX

The given conversions may suffer from rounding errors and are only for guidance.
The shown rules are 1 mm thick. Please note that the very short rules may not be rendered correctly on your screen (or printer) and appear longer than they are.

Absolute Units

Scaled Point <div>Definition</div> <p>The scaled point is defined as 1/65 536 points.</p> <div>Note</div> <p>This is the smallest unit T_EX uses.</p> <div>Conversion</div> <p>1 sp = 0 mm = 0.000 02 pt</p>	Millimeter <div>Definition</div> <p>SI unit</p> <div>Conversion</div> <p>1 mm = 2.845 26 pt = 186 467 sp</p>
(PostScript-)Point <div>Definition</div> <p>The point is defined as 1/72.27 inch.</p> <div>Conversion</div> <p>1 pt = 0.351 46 mm = 65 536 sp</p>	Pica <div>Definition</div> <p>One pica equals twelve points.</p> <div>Conversion</div> <p>1 pc = 4.217 54 mm = 12 pt = 786 432 sp</p>
Big Point (DTP point) <div>Definition</div> <p>The big point is defined as 1/72 Inch.</p> <div>Note</div> <p>Word, InDesign and other DTP applications use this definition for points.</p> <div>Conversion</div> <p>1 bp = 0.352 77 mm = 1.003 74 pt = 65 781 sp</p>	Cicero <div>Definition</div> <p>One Cicero equals twelve Didot points.</p> <div>Conversion</div> <p>1 cc = 4.5128 mm = 12.8401 pt = 841 489 sp</p>
Didot Point <div>Definition</div> <p>An old unit used by European printers</p> <div>Conversion</div> <p>1 dd = 0.376 07 mm = 1.07 pt = 70 124 sp</p>	Centimeter <div>Definition</div> <p>SI unit</p> <div>Conversion</div> <p>1 cm = 10.000 05 mm = 28.452 74 pt = 1 864 679 sp</p>
	Inch <div>Definition</div> <p>One inch equals 2.54 centimeters.</p> <div>Conversion</div> <p>1 in = 25.400 13 mm = 72.269 99 pt = 4 736 286 sp</p>

Relative Units

These units depend on the currently active font size.
For more details about em and ex see: <http://tex.stackexchange.com/q/4239/4918>

Em <div>Definition</div> <p>Traditionally, an em was defined as the width of a capital M or to be equal to the font size, but today the actual value is defined in the font file.</p> <div>Note</div> <p>This unit should be used for all horizontal distances that should change relative to the font size; the paragraph indentation for instance.</p>	Ex (x Height) <div>Definition</div> <p>Traditionally, an ex was defined as the height of a lower case x, but today the actual value is defined in the font file.</p> <div>Note</div> <p>This unit should be used for all vertical distances that should change relative to the font size.</p>	Math Unit <div>Definition</div> <p>This unit equals approx 1/18 em of the math font family.</p> <div>Note</div> <p>It can only be used for spacing in math mode.</p>
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