

Page borders – inches or millimetres?

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Most individuals, most companies, and many nations do not have a measurement policy – this costs a great deal of money – probably about 10 % of turnover or GDP. (See <http://www.metricationmatters.com/docs/CostOfNonMetrication.pdf>)

The costs of not having a measurement policy soon mount up, and this is most evident in large economies. For example, through not using the metric system, the USA wastes about 10 % of its gross domestic product, which amounts to more than a trillion dollars a year!

A trillion dollars a year is an unbelievable amount to pay for lack of a measurement policy!

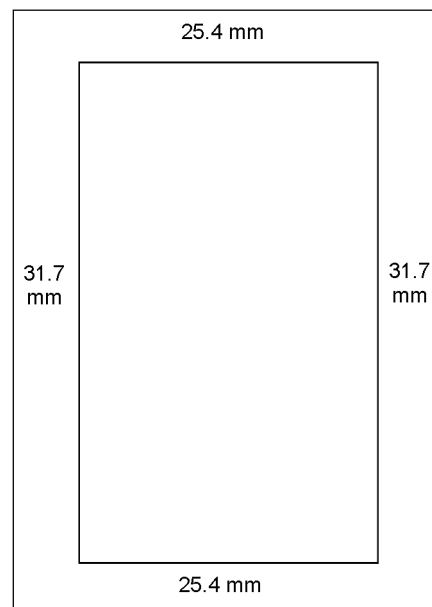
In this short article I will only explore one area of waste – the waste of office paper – because individuals, businesses, and governments all share this wasteful practice.

When you turn your word processor on each morning, it automatically selects certain defaults set by software engineers in the USA. As the USA is now the only advanced nation in the world yet to openly embrace the metric system, these software defaults are set in old pre-metric inch measures (and many people don't know how to alter the defaults). One important default is the size of the margins in your word processor, and this is costing the people of the USA – and people in the rest of the world – a lot of money.

I live in Geelong in Australia so, for example, I will use Microsoft Word and A4 paper (210 millimetres wide and 297 millimetres long) and I will work in millimetres to use whole numbers and to avoid fractions when I can. Similar calculations, and savings, can readily be made on *U.S. Letter* paper (216 mm x 279 mm) See:

<http://www.environmentalpaper.org/documents/paperefficiencyfactsheet.pdf>

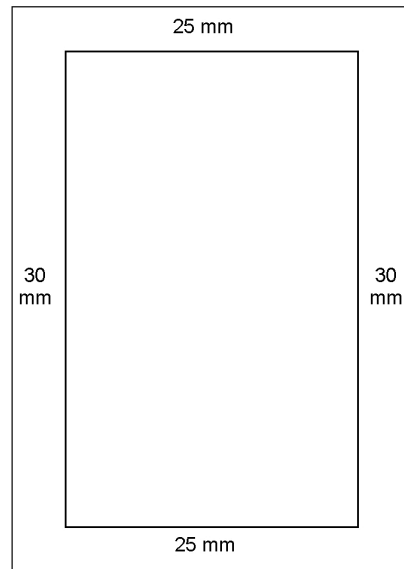
Microsoft engineers set the defaults for an A4 page (210 mm x 297 mm) at 1 inch (25.4 mm) top and bottom, with 1 and a 1/4 inch (31.7 mm) on each side. This diagram shows the Microsoft Word margin defaults.



The software engineers have provided a working area 146.6 mm by 246.2 mm or 36 093 square millimetres.

This A4 page has margins of 1 inch (25.4 mm) top and bottom and 1 1/4 in (31.7 mm) side margins.

Compare this to the rounded metric measures of 25 mm and 30 mm (instead of 25.4 mm and 31.7 mm). Now your page looks like this.



Your working area has now increased to 37 050 square millimetres (150 mm x 247 mm). If you use the whole page (as you do in reports or newsletters) the paper saving is about 957 square millimetres or 2.65 % of your previous costs.

Saving about 2.7 % of the 490 000 000 tonnes of paper used each year for business forms in offices in the USA, would reduce annual office costs nationwide by about \$3 500 000 000 000 each year — and this estimate does not include any savings from reduced printing, photocopying, paper handling, and storage costs.

Simply upgrading the old inch default margins to rounded millimetres achieves this significant gain.

However, reducing 25.4 mm to 25 mm and 31.7 mm to 30 mm is not much. Now that you are comfortable using millimetres you might like to explore other possibilities for paper savings.

What if you arranged with your art department to suggest a pleasing appearance for your stationery and they chose the classical '*golden mean ratio*' for your working area with 25 mm margins top and bottom and 29 mm on each side, you save 1476 square millimetres or 4 %.

Margins of 25 mm all the way around the page — with savings of 9.5 % — would save about 490 000 tonnes of paper in the USA every year, reducing greenhouse gases by 1.45 million tonnes, equivalent to taking 280 000 cars off the road permanently.

You might even reduce margins to 20 millimetres all the way around. Your savings would then be 7621 square millimetres per page or a bit more than 21 % of your paper cost. How much would 21 % of your paper cost contribute to your company's annual profit?

Top and bottom margins	Side margins	Working area	Saving area	Saving %
1 inch (25.4 mm)	1 1/4 in. (31.7 mm)	36 093 mm ²	Nil	Nil
25 mm	30 mm	37 050 mm ²	957 mm ²	2.65 %
25 mm	29 mm	37 544 mm ²	1 451 mm ²	4.02 %
25 mm	25 mm	39 520 mm ²	3 427 mm ²	9.49 %
20 mm	20 mm	43 690 mm ²	7 597 mm ²	21.05 %

This A4 page has margins of 25 mm all the way round.