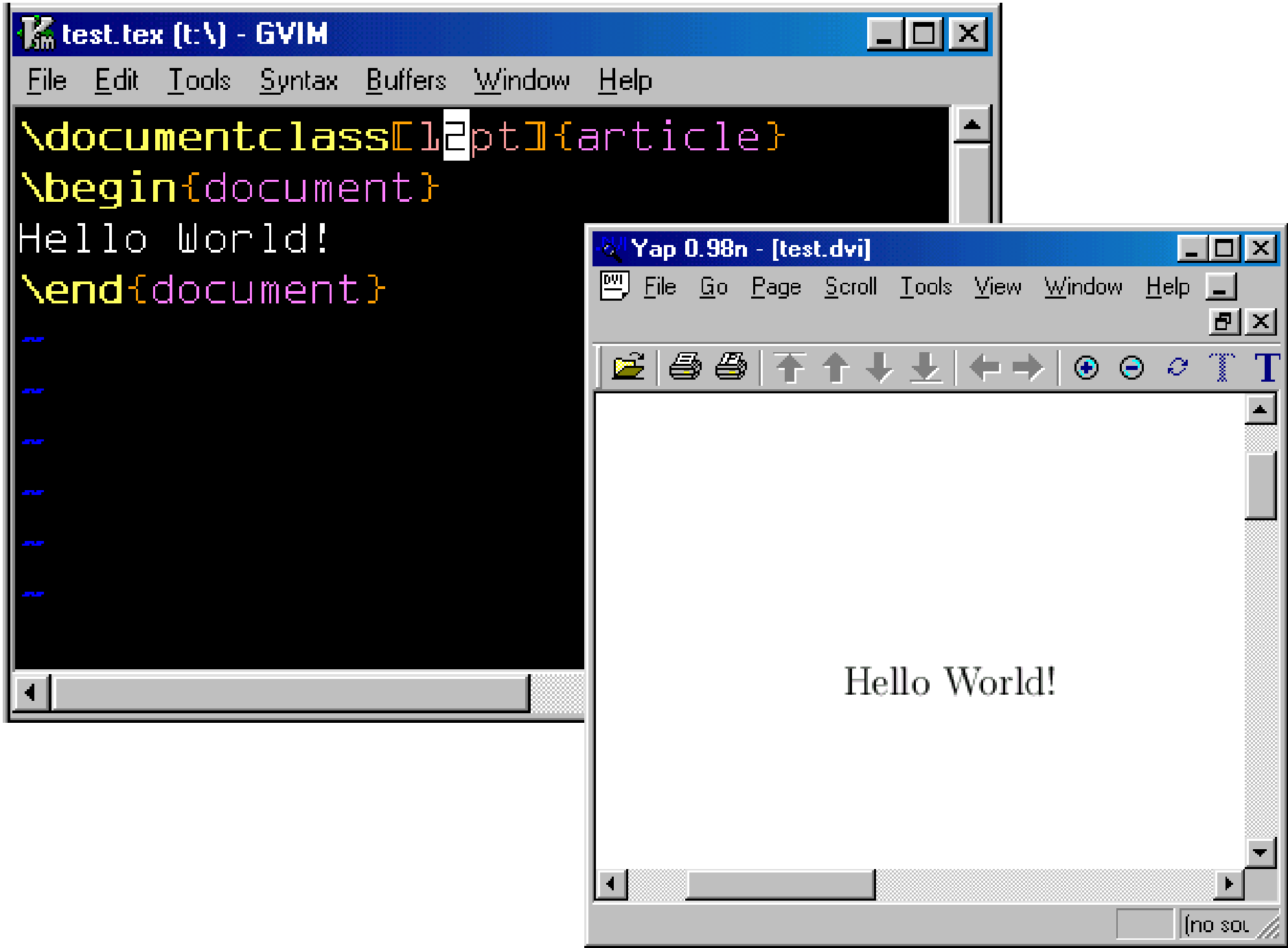
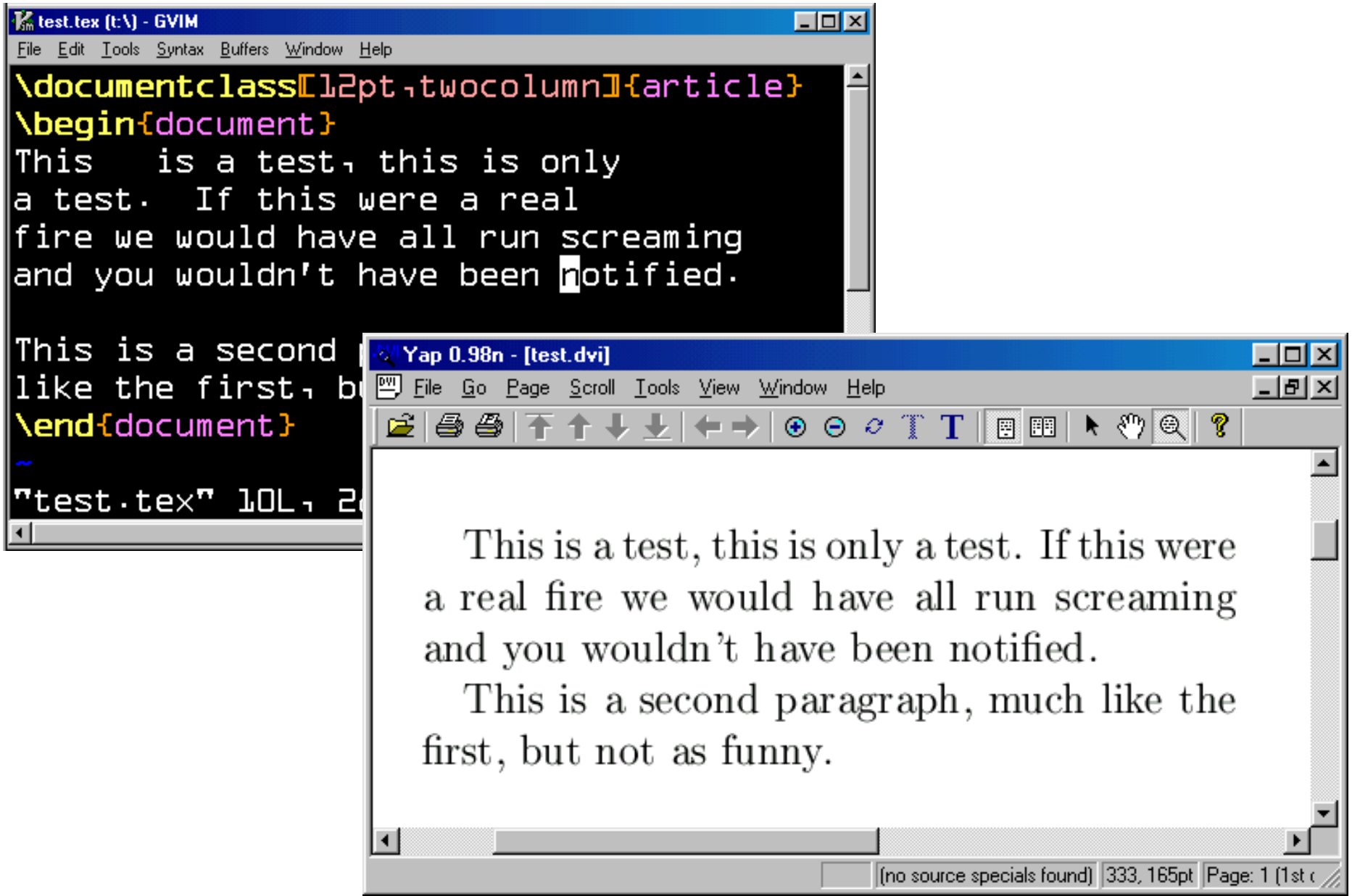
How to do stuff in LaTeX

Outline

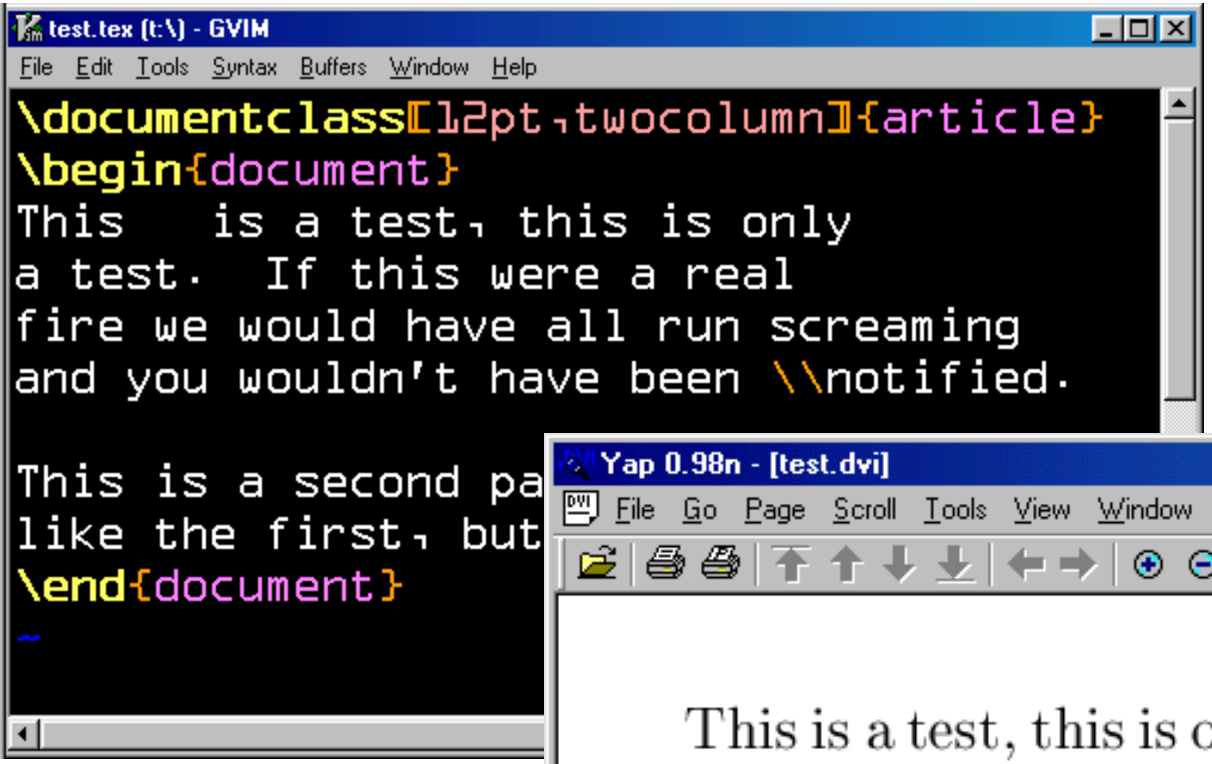
- Starting Out.
- LaTeX as your word processor.
- Compose formulas.
- Include pictures and figures.

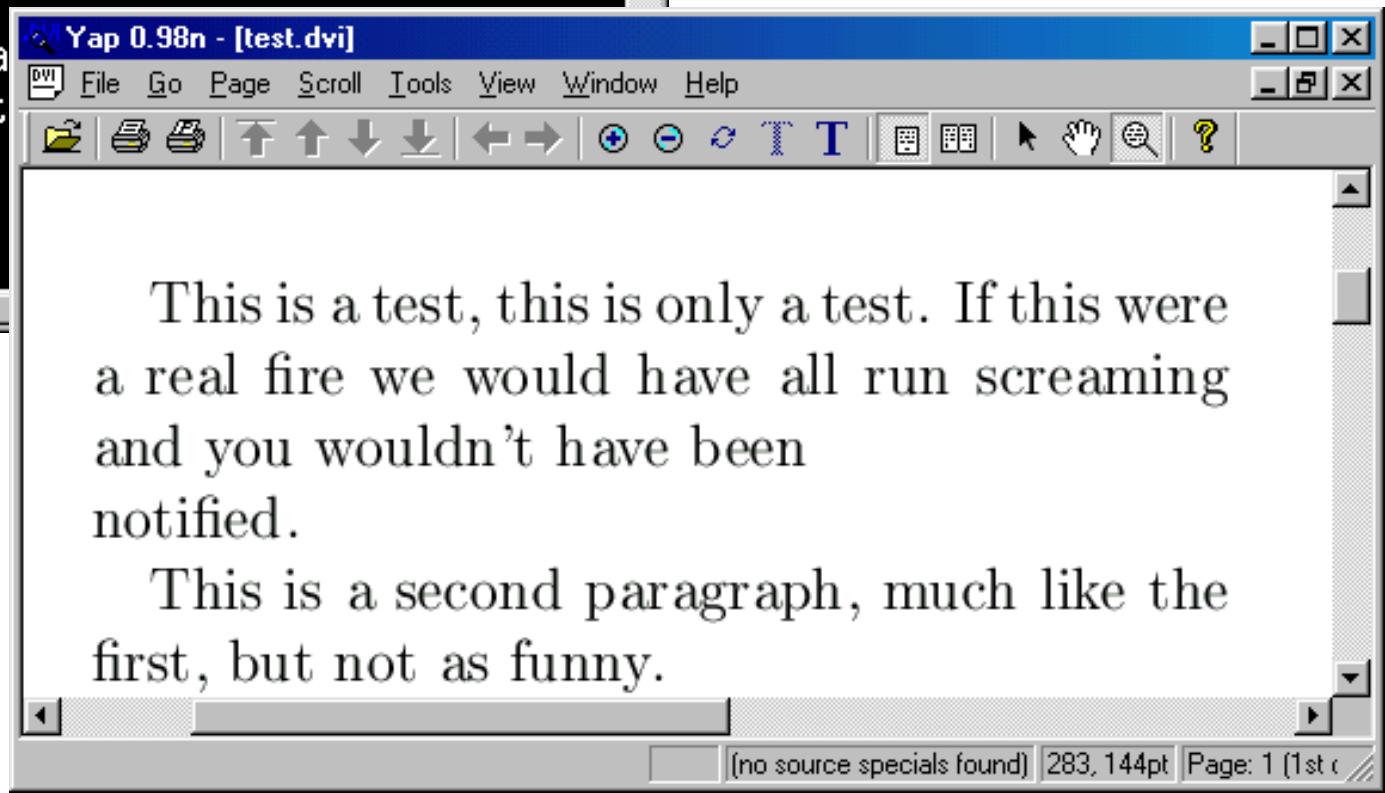

test.tex (t:\) - GVIM
File Edit Tools Syntax Buffers Window Help
\documentclass[12pt]{article}
\begin{document}
Hello World!
\end{document}
Yap 0.98n - [test.dvi]
File Go Page Scroll Tools View Window Help
Hello World!

Spacing, sentences, paragraphs

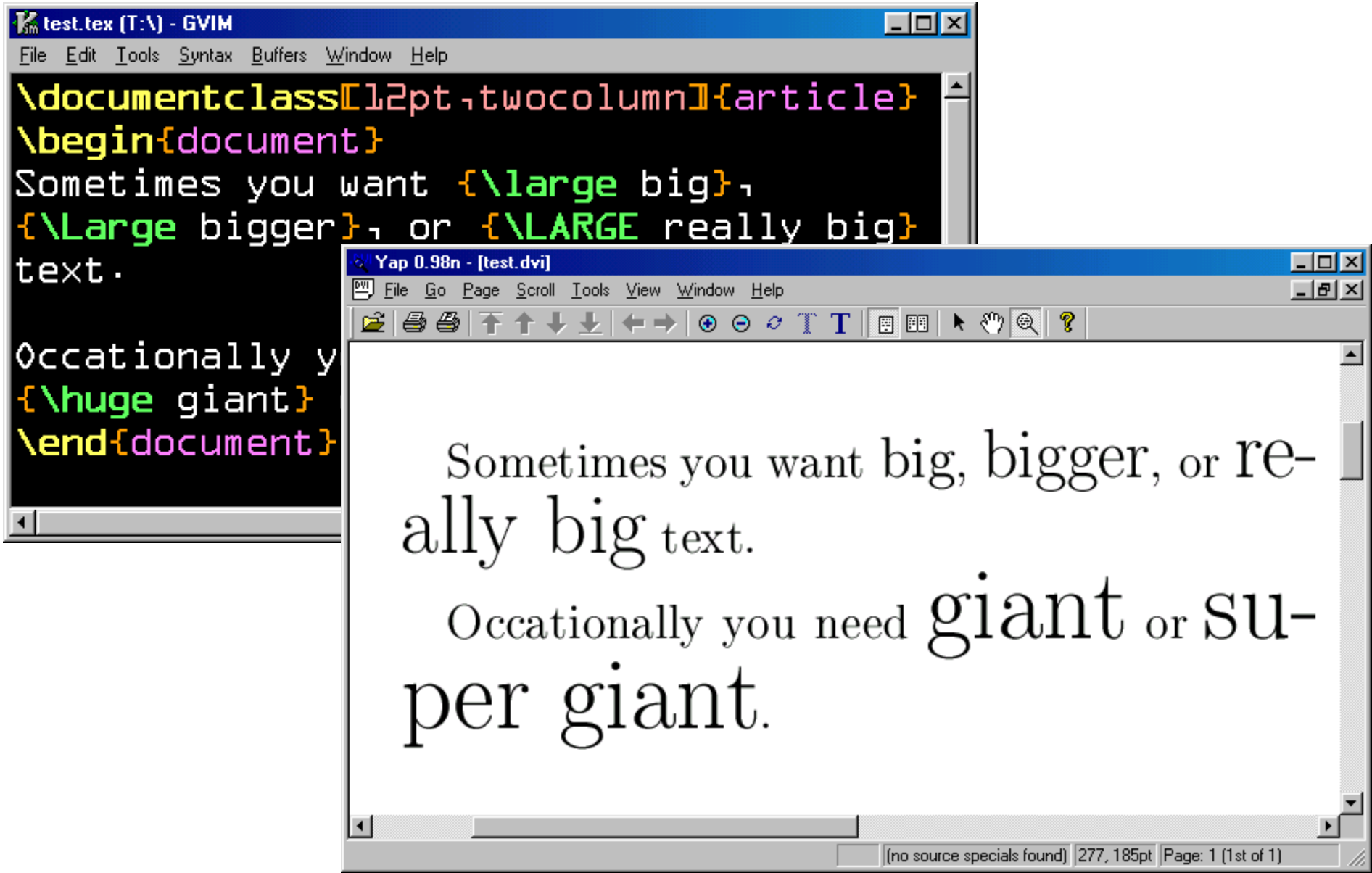


using \\ for line breaks

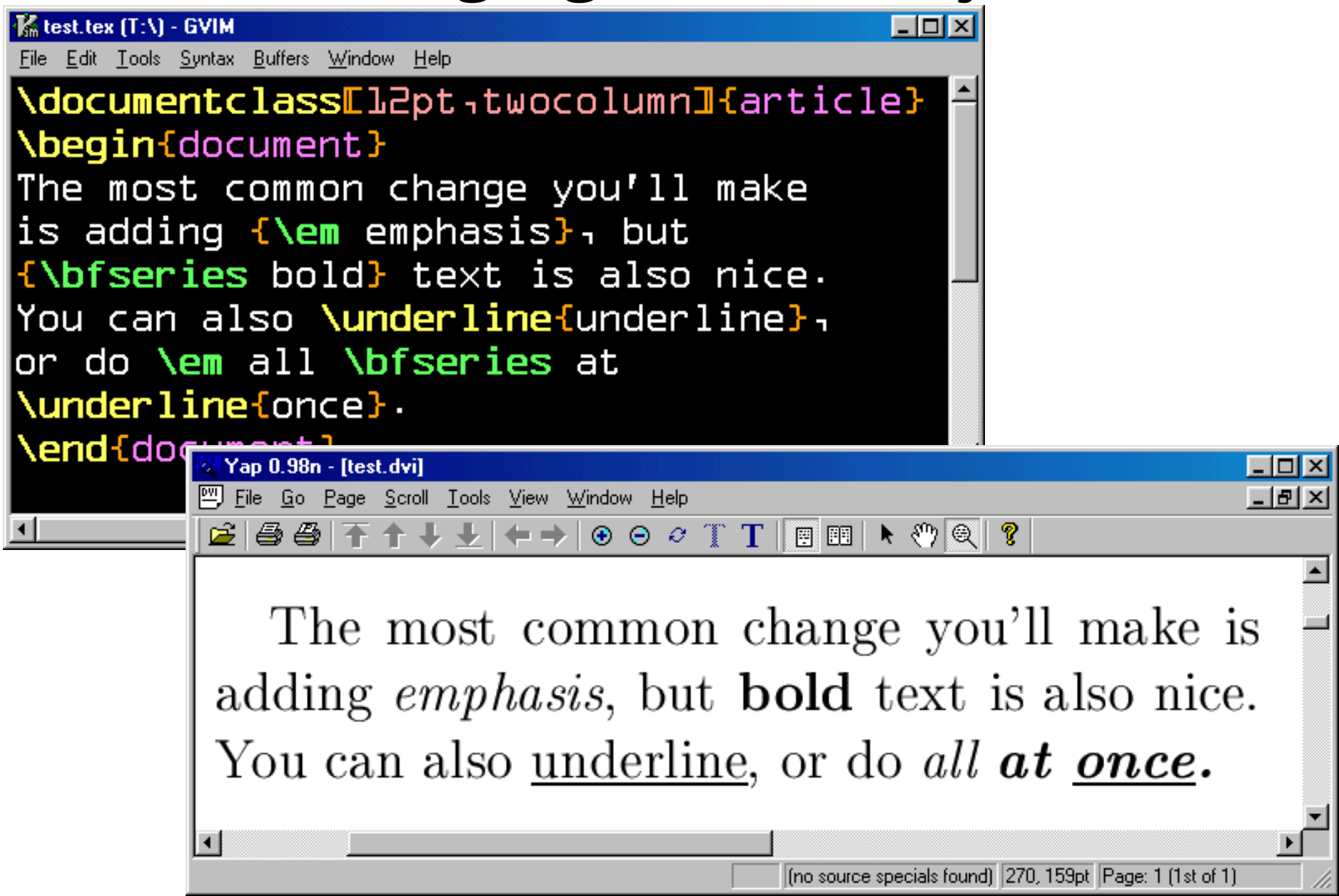




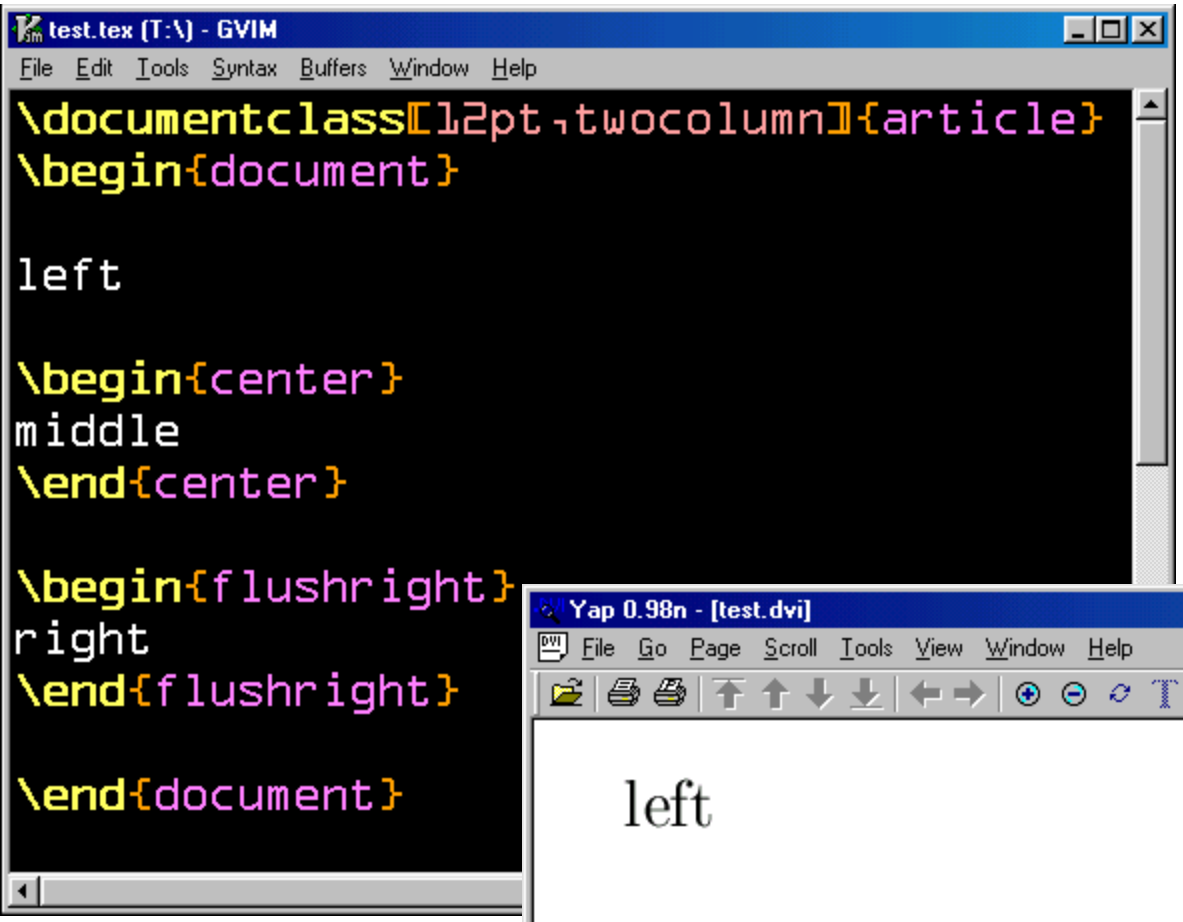
changing the font size

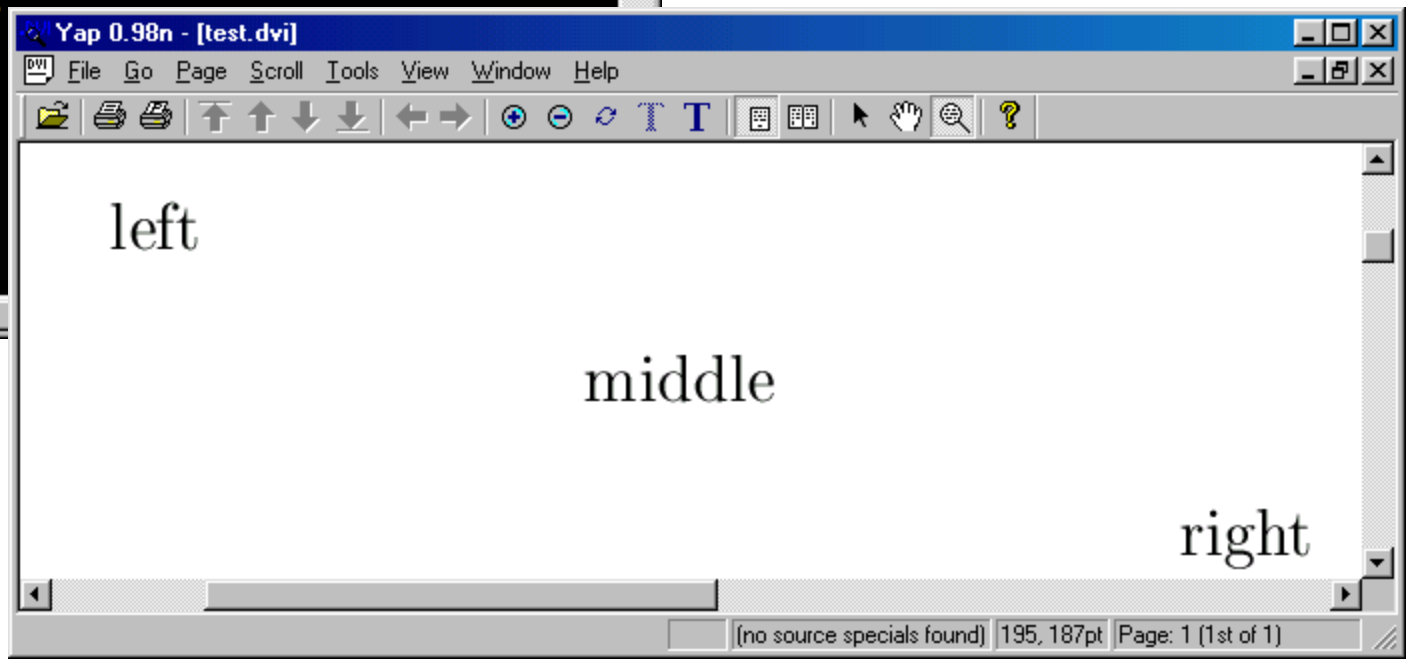


changing the font style



justifications





quoting

test.tex (T:\) - GVIM

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```
\documentclass[12pt,twocolumn]{article}
\begin{document}
``To have `quotes' apear around
a `word' you must use multiple single
quotes and backticks.''

\begin{quote}
You can also s
which will be
\end{quote}
\end{document}
```

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"To have 'quotes' apear around a 'word' you must use multiple single quotes and back-ticks."

> You can also set off text like this, which will be indented on both sides.

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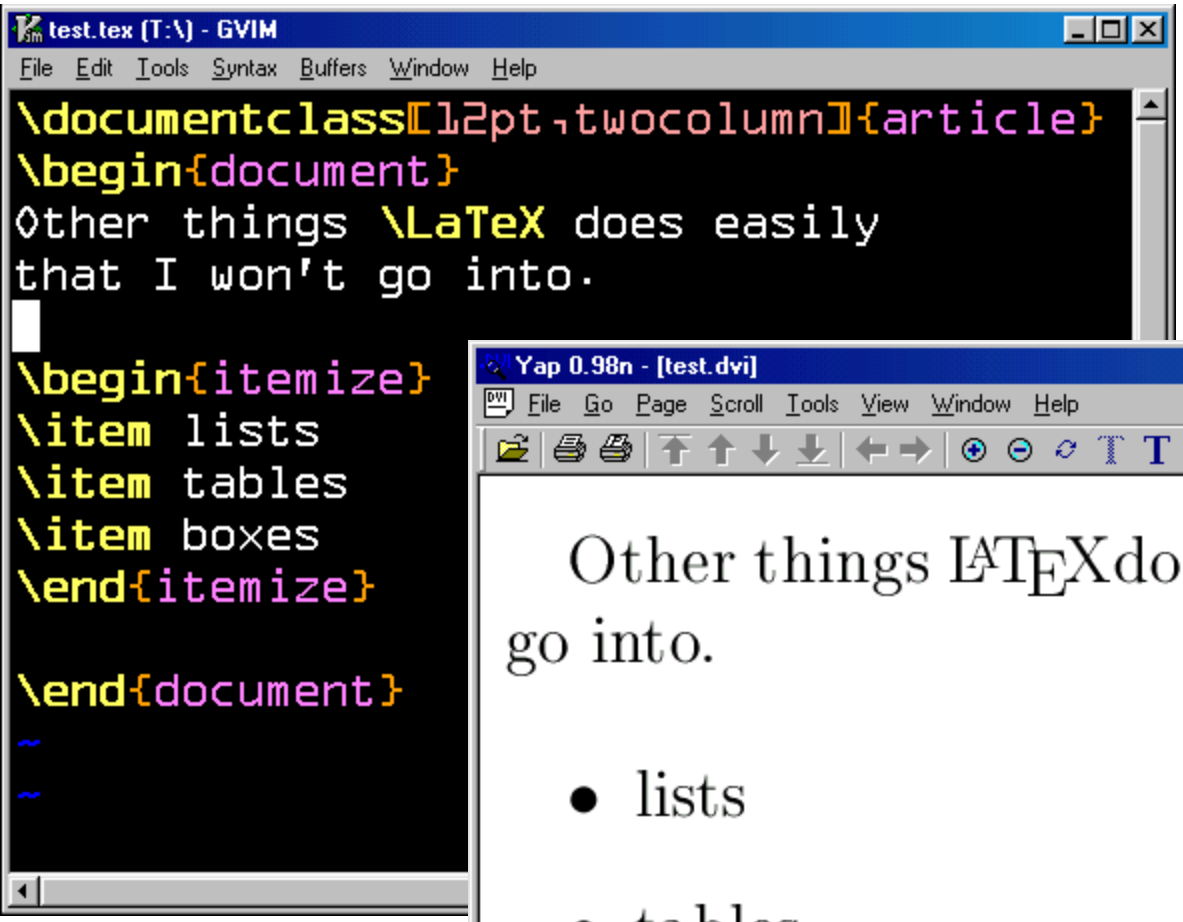
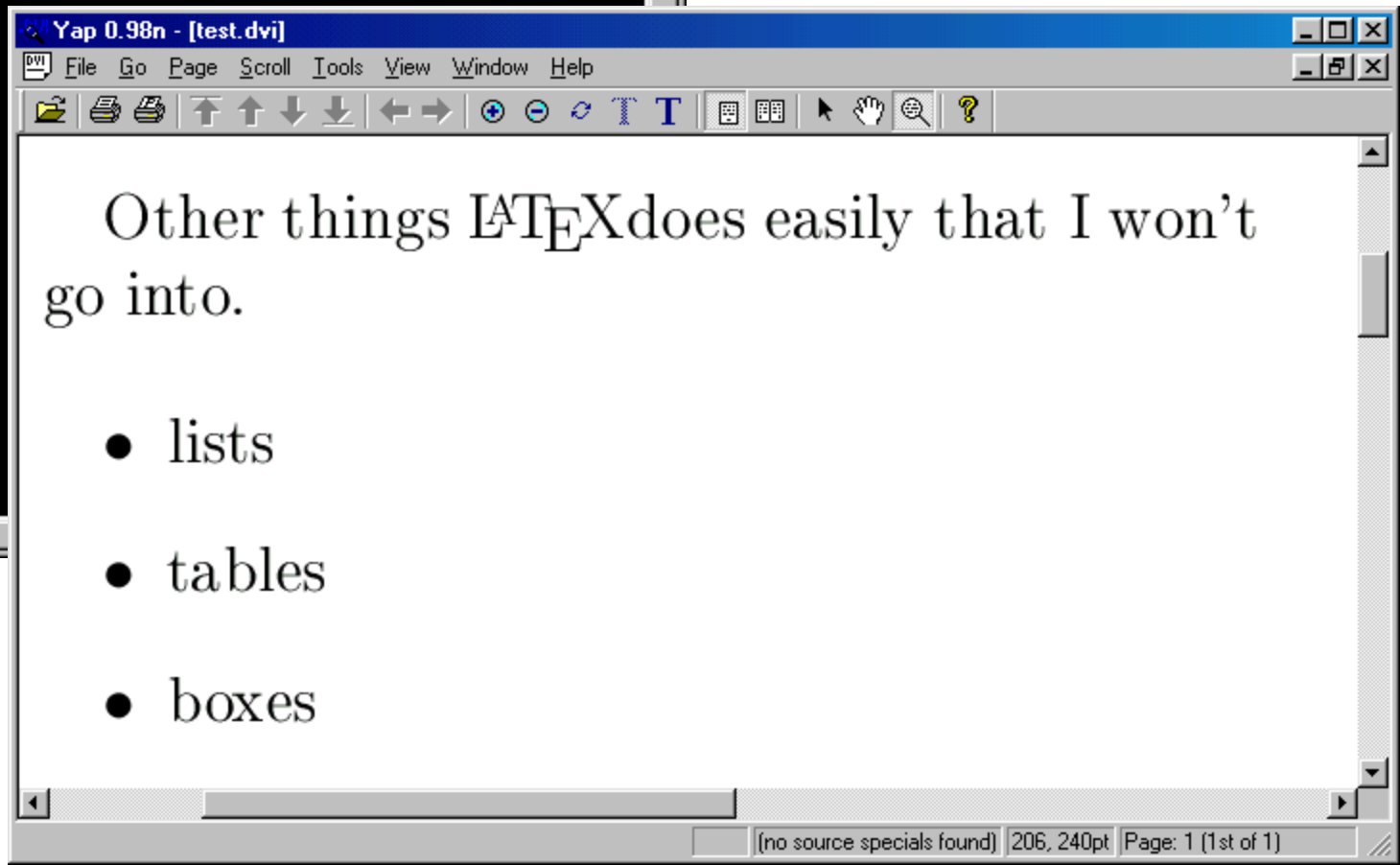
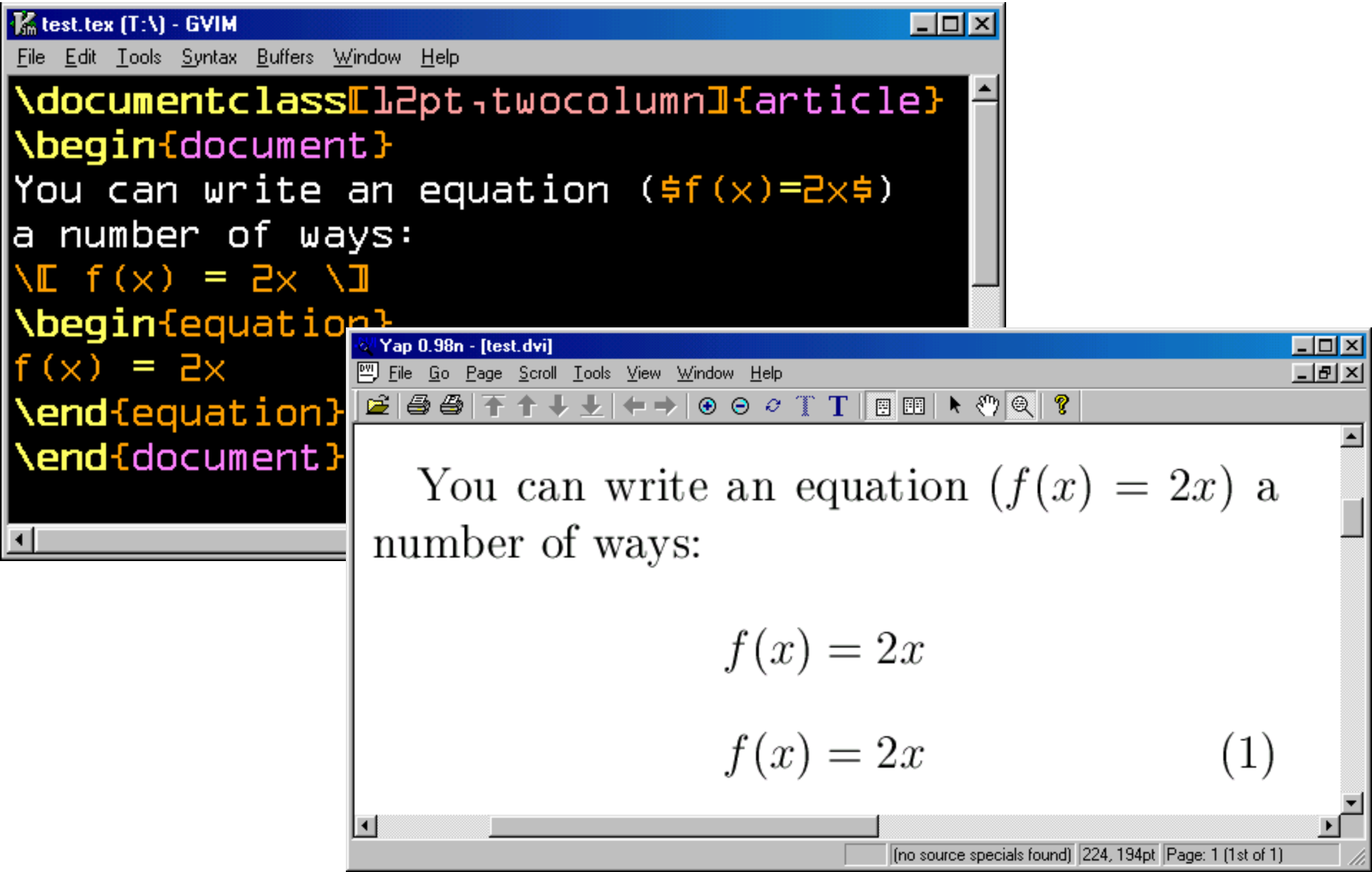
other tricks

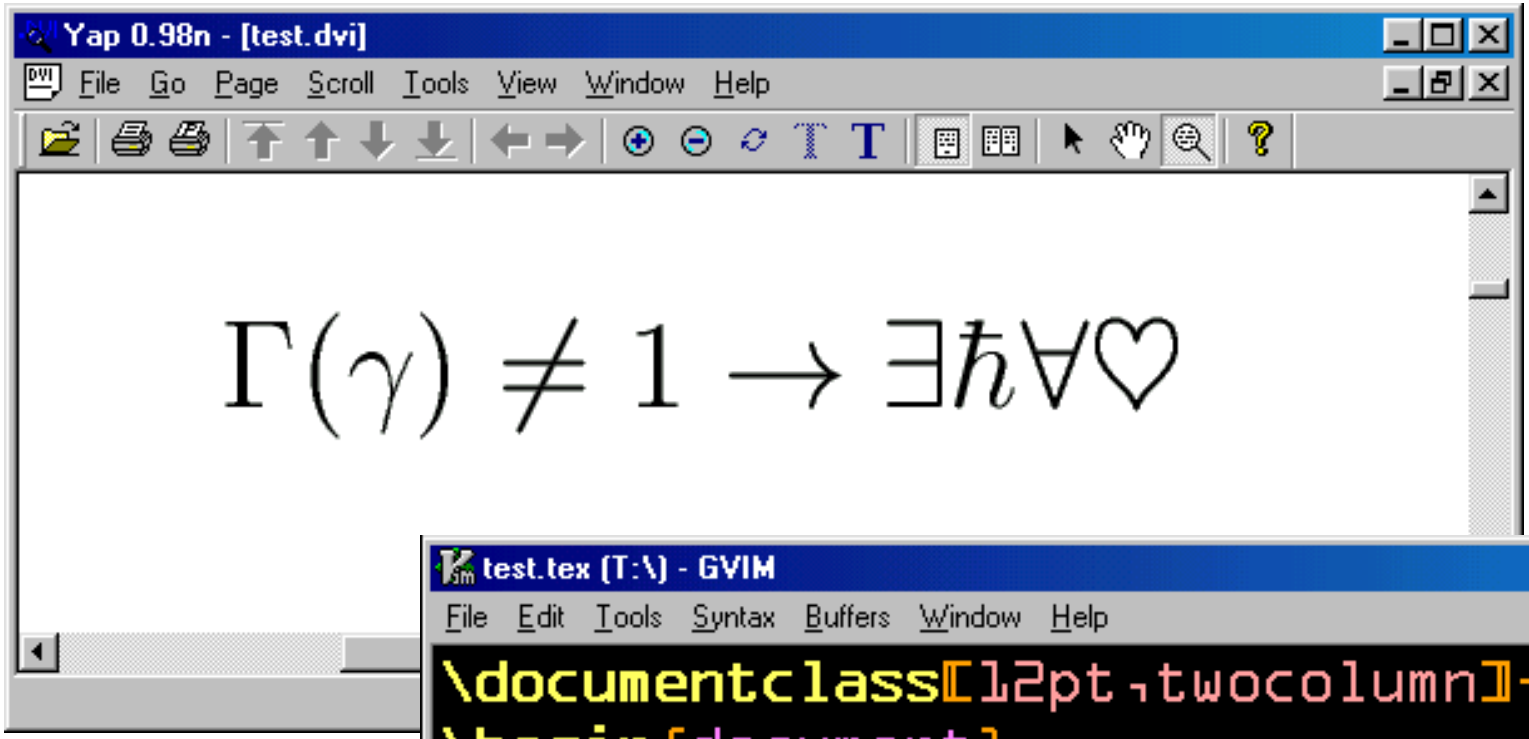


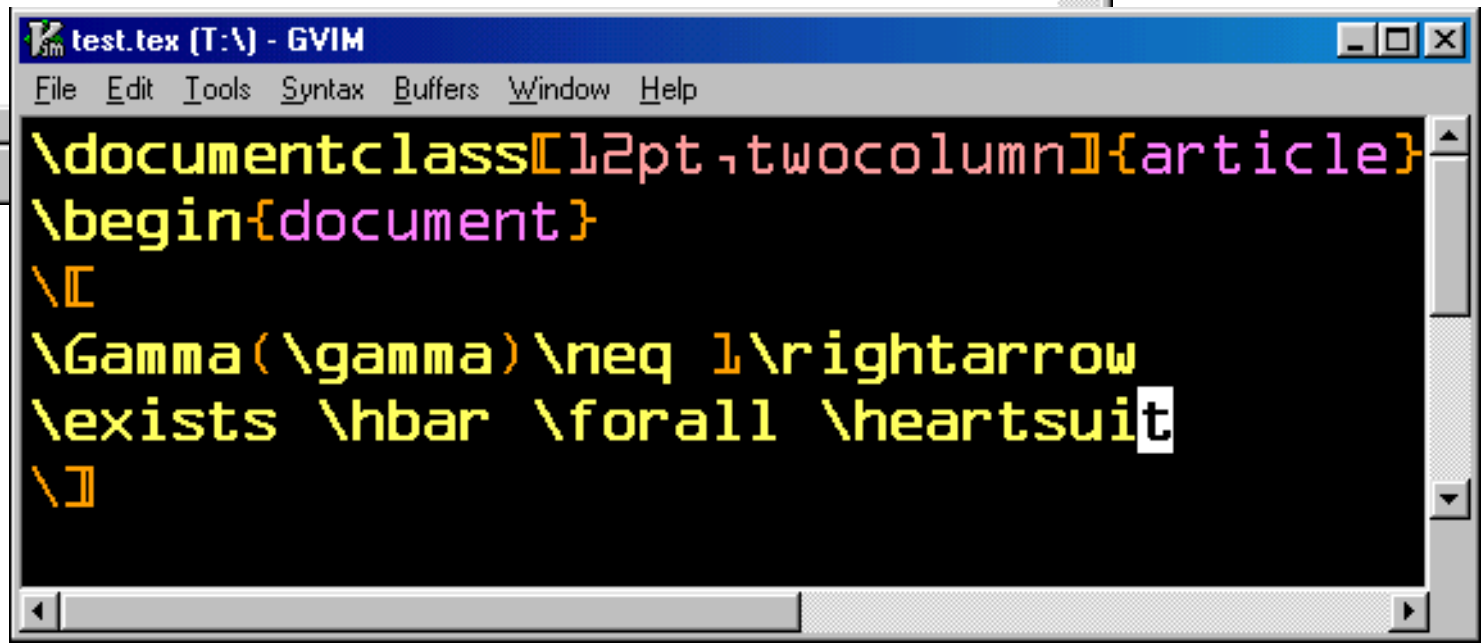


mmm. math mode.

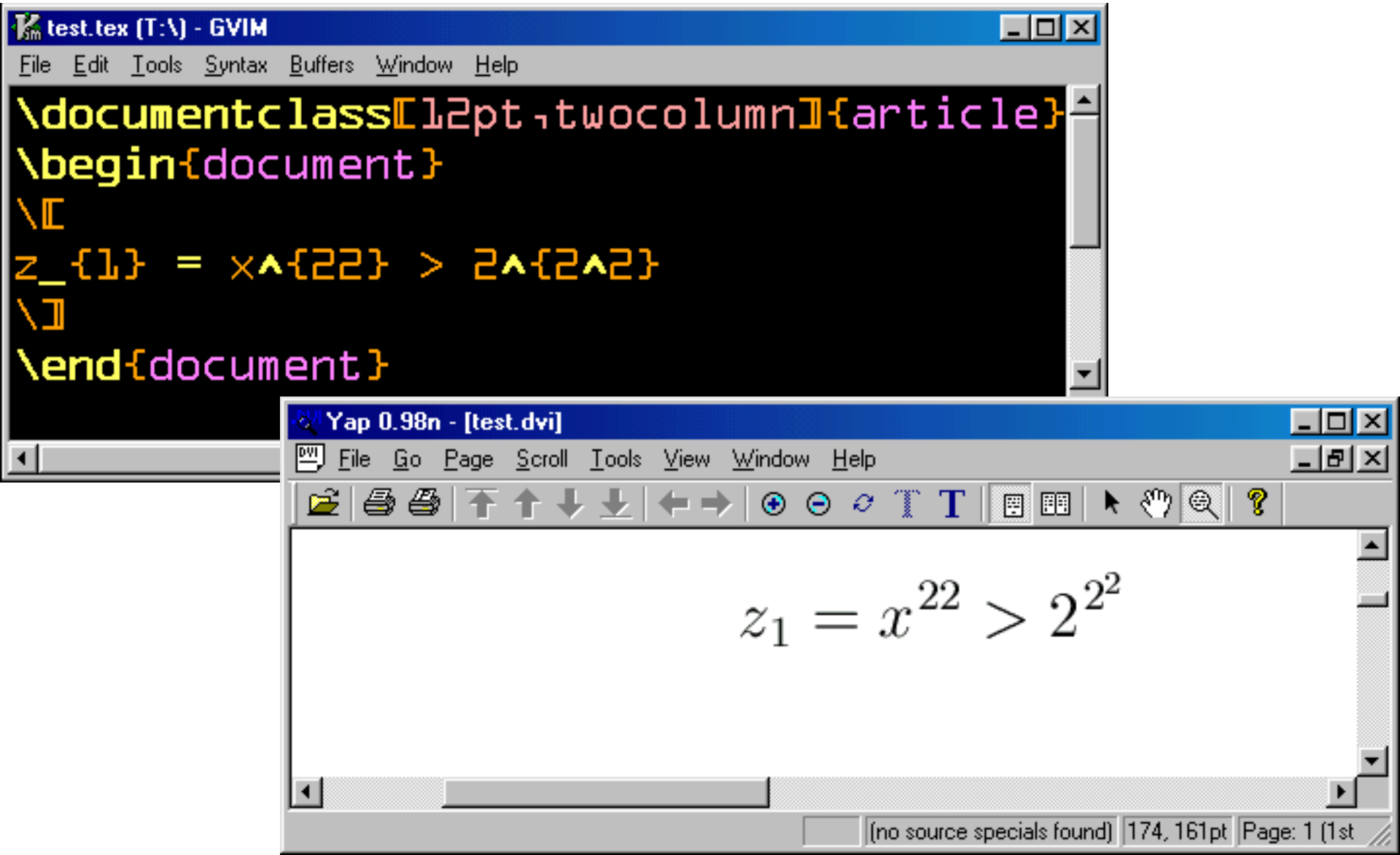


the big secret of LaTeX

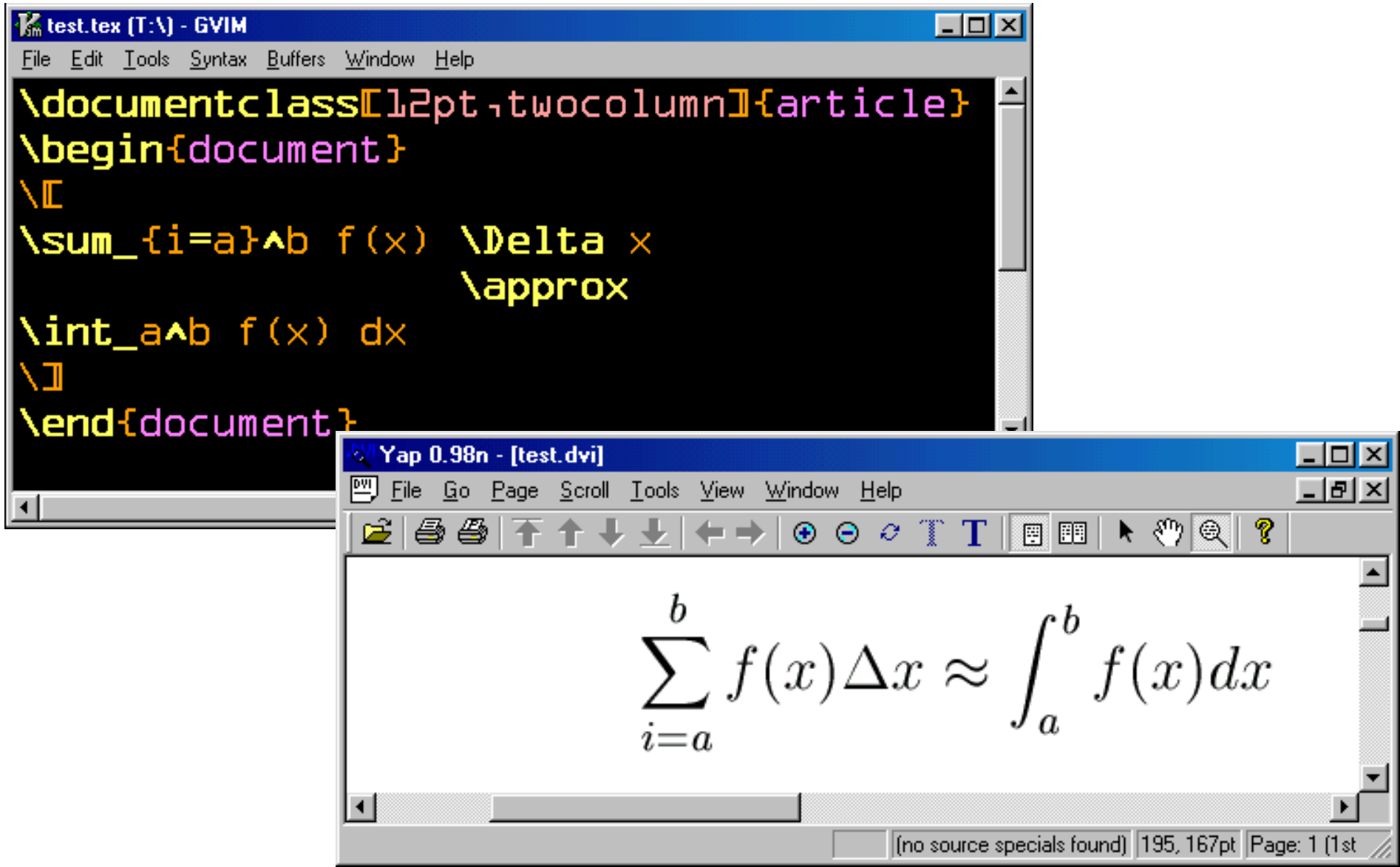




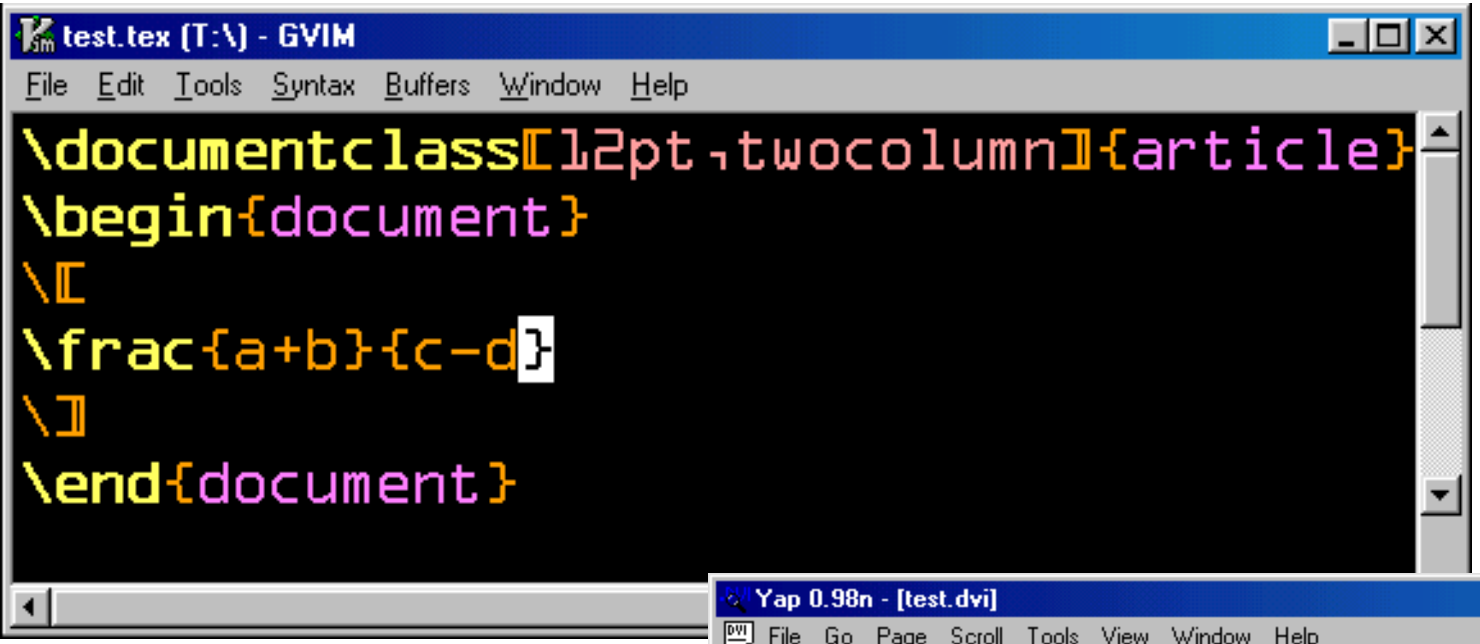
subscripts, superscripts

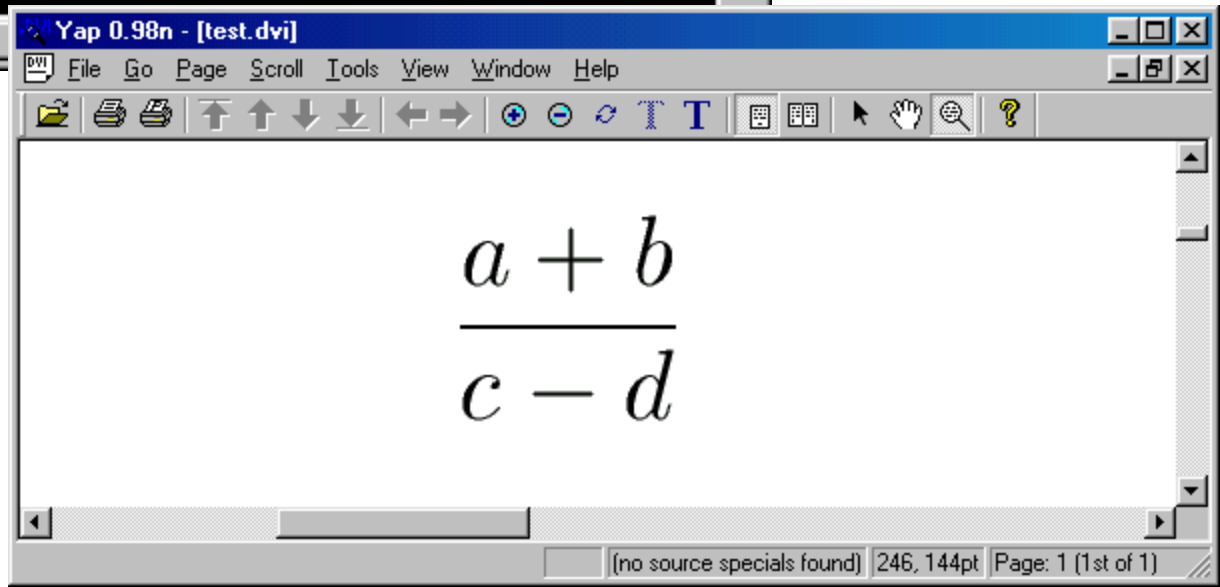


integrals, summations



fractions


test.tex (T:\) - GVIM
File Edit Tools Syntax Buffers Window Help
\documentclass[12pt,twocolumn]{article}
\begin{document}
\[
\frac{a+b}{c-d}
\]
\end{document}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$$\frac{a+b}{c-d}$$
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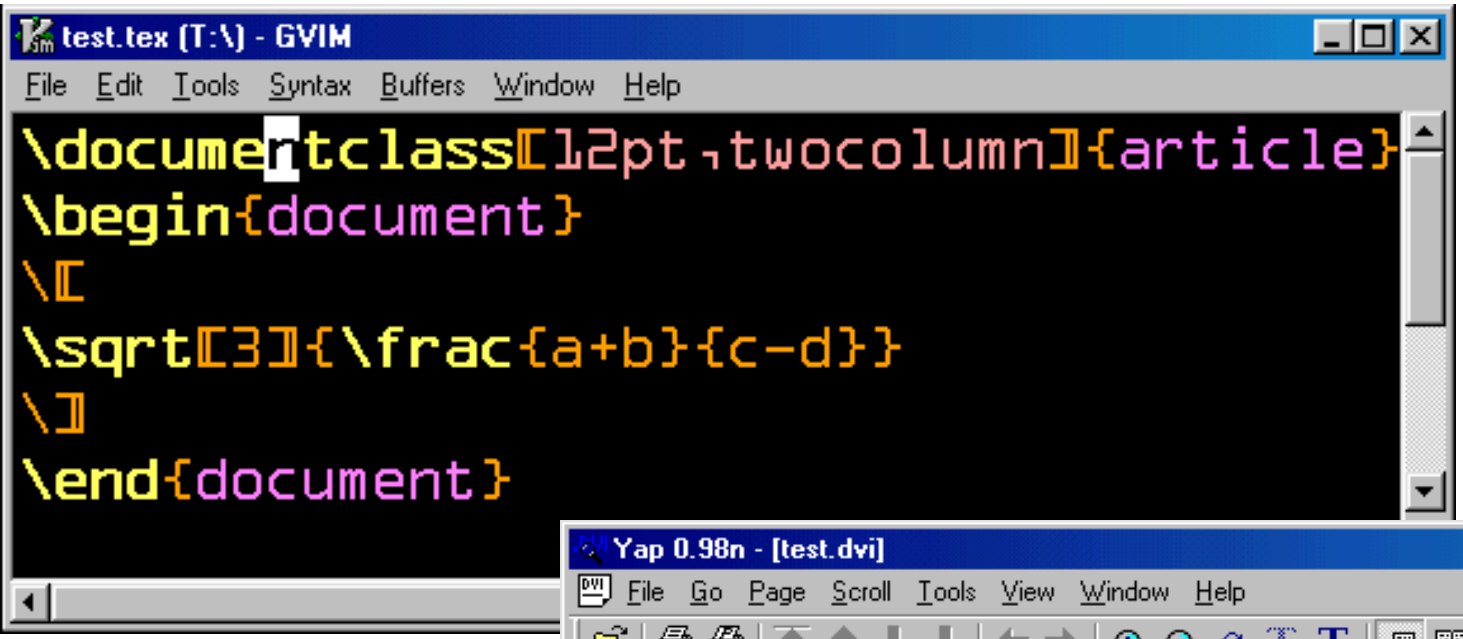
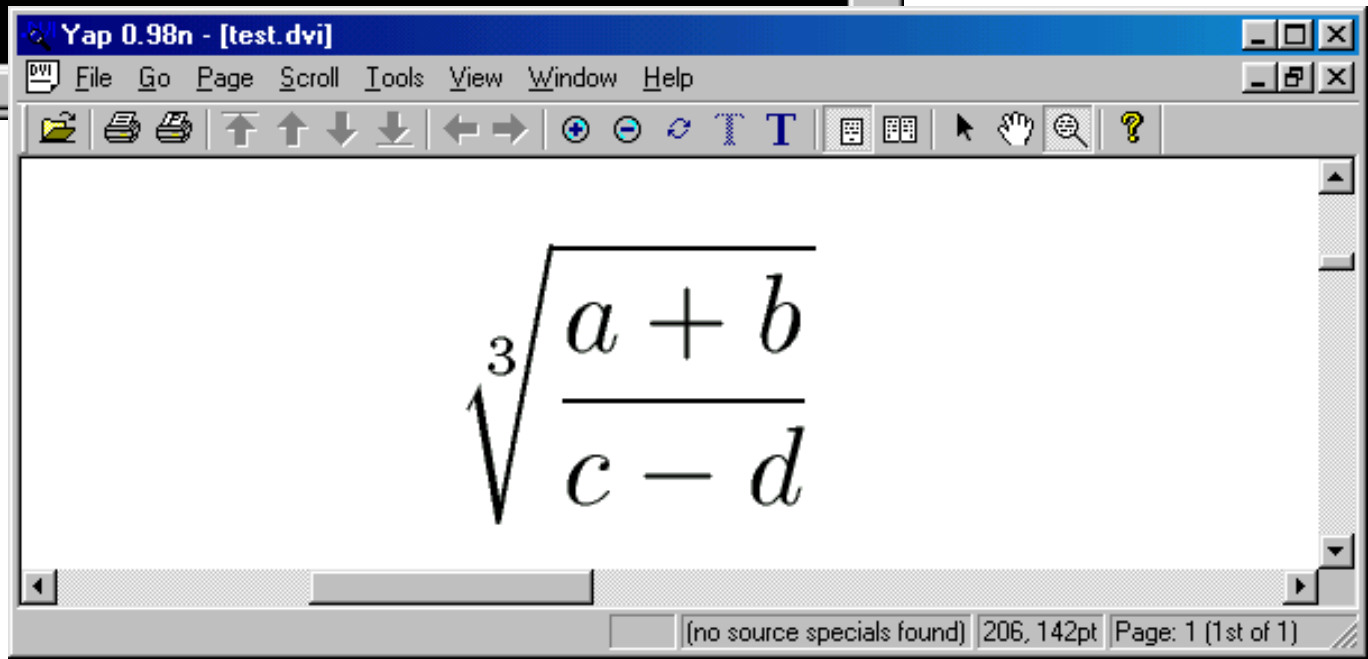
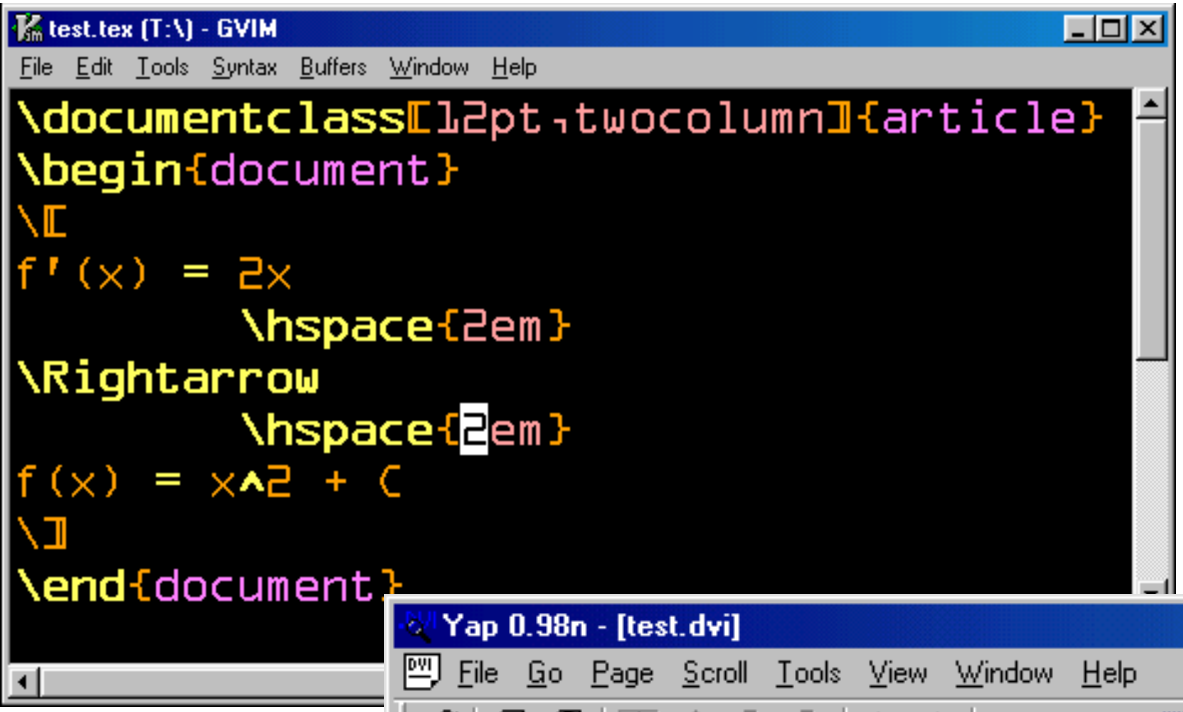
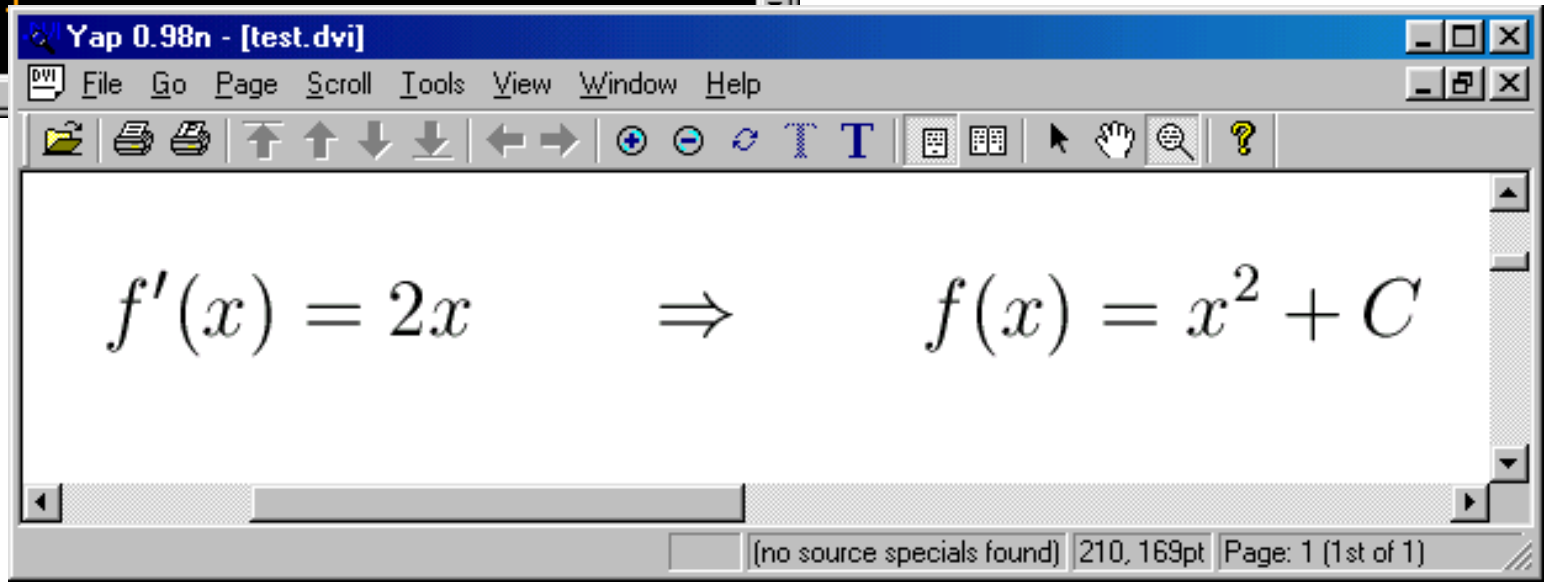
square-roots





insert your own spacing





use ‘array’ to make tables & matrices

test.tex (T:\) - GVIM

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```
\documentclass[12pt,twocolumn]{article}
\begin{document}
\[
\begin{array}{clr}
1 & 22 & 3 \\
99 & 5 & x^2
\end{array}
\]
\end{document}
~
```

Yap 0.98n - [test.dvi]

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$$\begin{array}{clr} 1 & 22 & 3 \\ 99 & 5 & x^2 \end{array}$$

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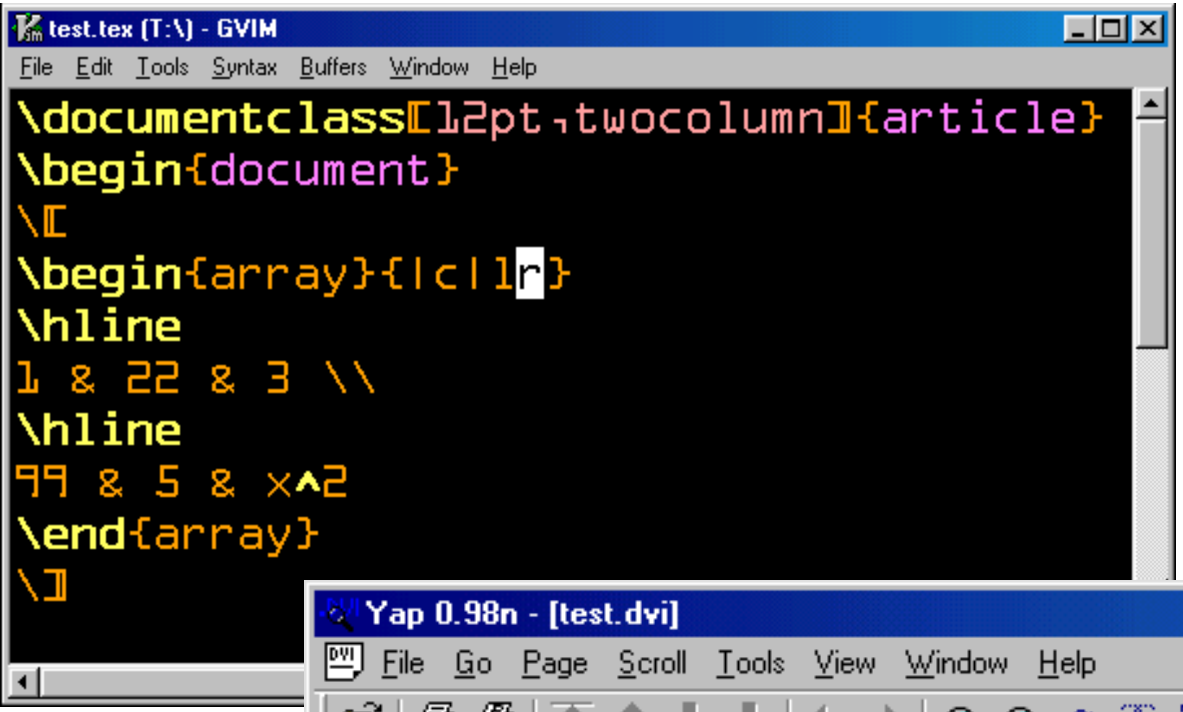
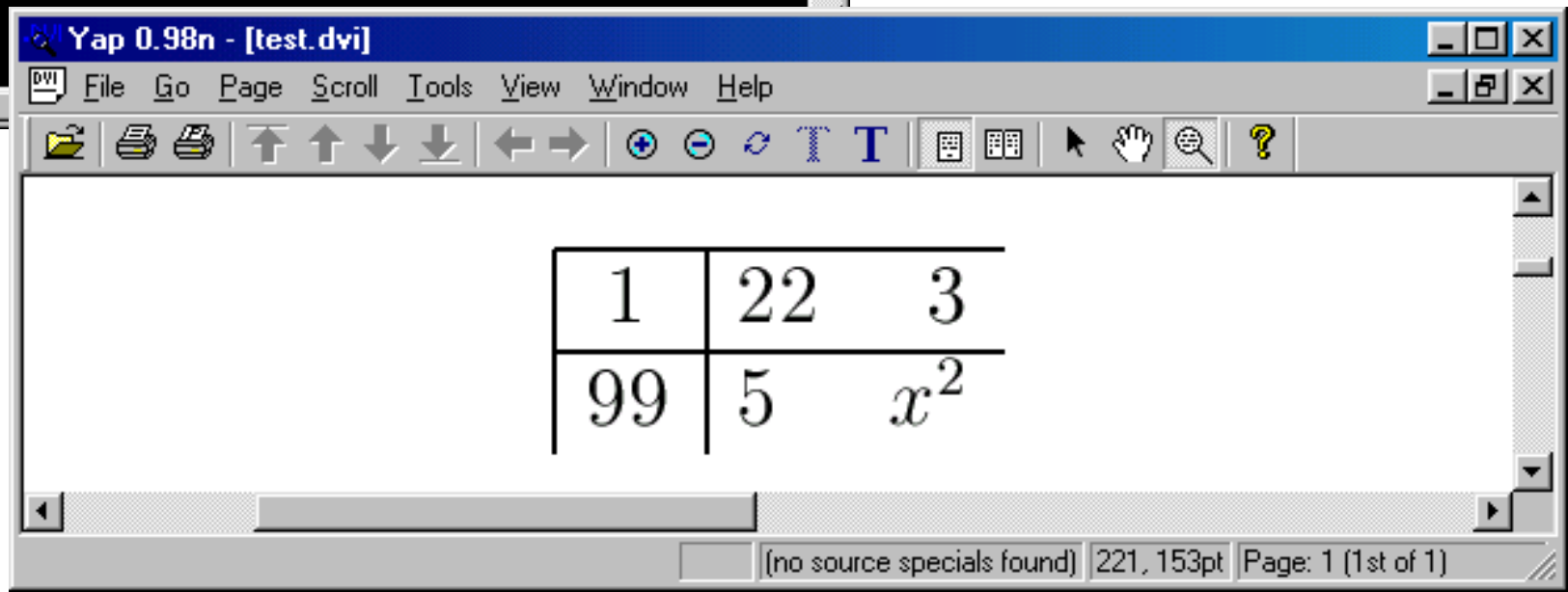
adding lines & borders





grouping with parentheses

test.tex (T:\) - GVIM

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```
\documentclass[12pt,twocolumn]{article}
\begin{document}
\[
\left[
\left(
\begin{array}{ccc}
1 & 22 & 3 \\
99 & 5 & x^2
\end{array}
\right)
+\frac{1}{2}\right]
\]
```

Yap 0.98n - [test.dvi]

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$$\left[\begin{pmatrix} 1 & 22 & 3 \\ 99 & 5 & x^2 \end{pmatrix} + \frac{1}{2}\right]$$

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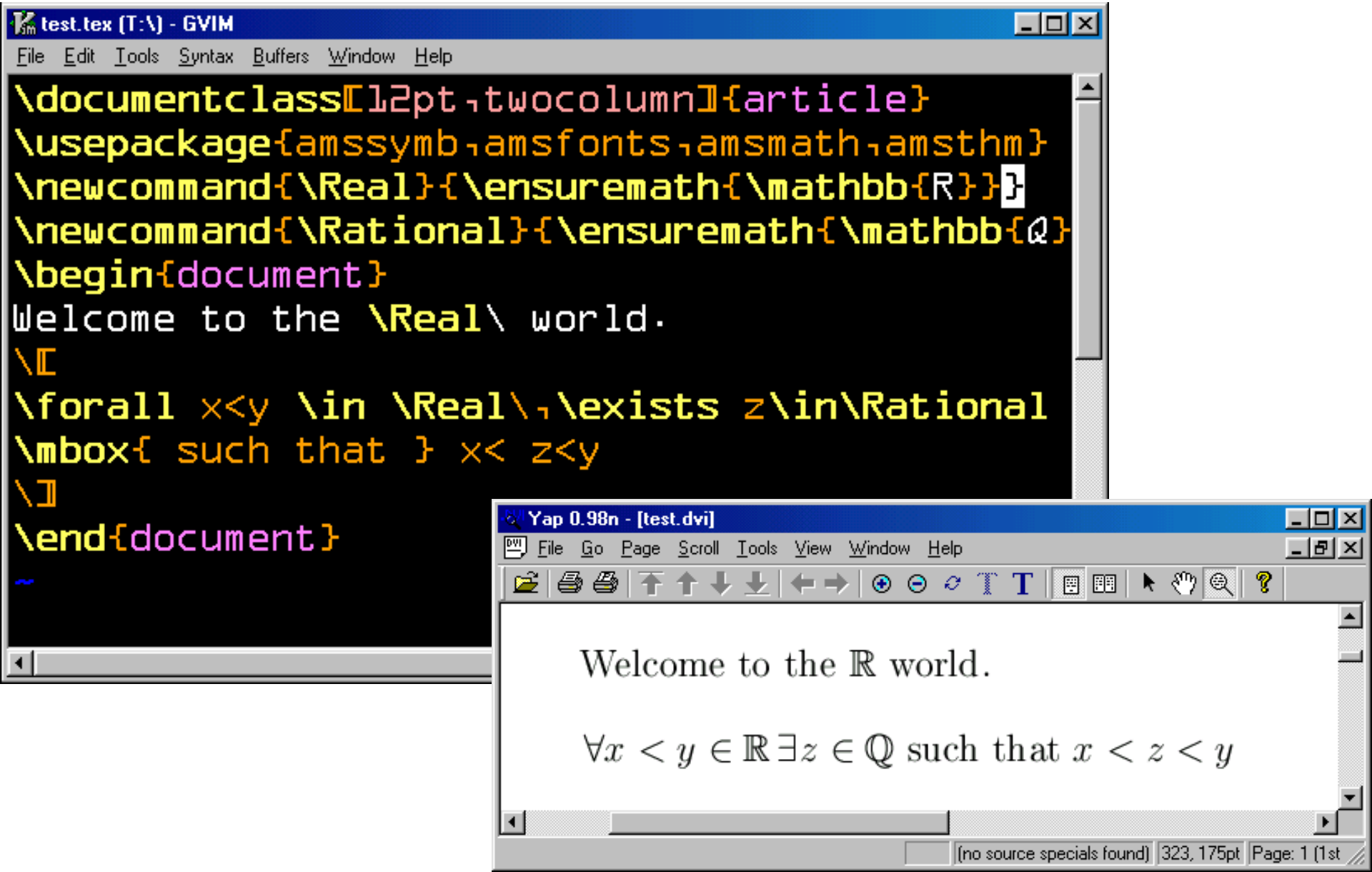
There and back again.



getting visual: images

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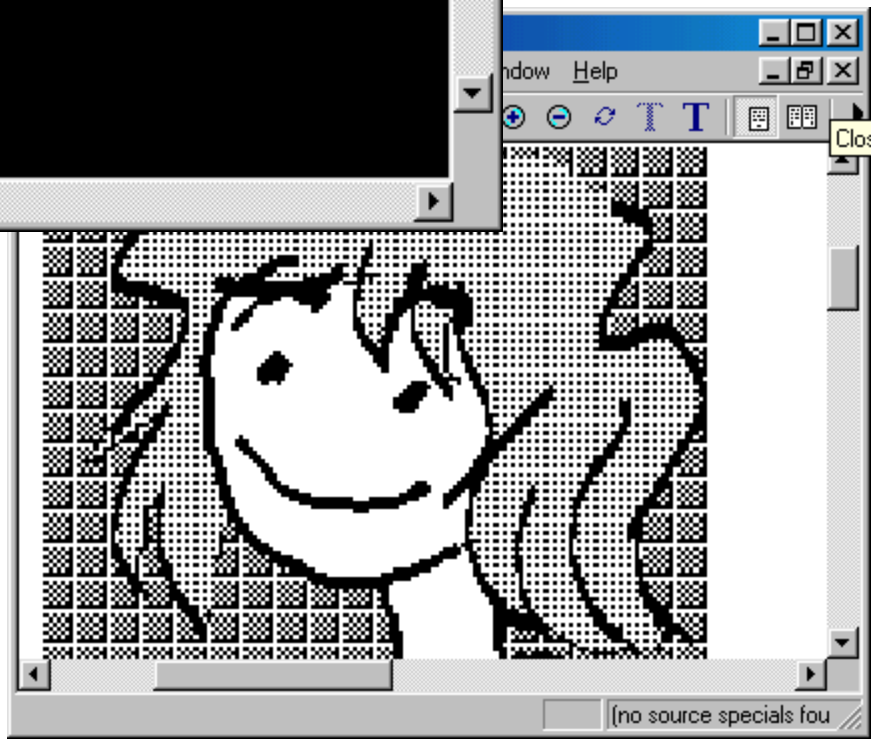
```
\documentclass[12pt,twocolumn]{article}
\usepackage{epsfig}
\begin{document}
\epsfig{file=smile.eps}
\end{document}
~
```



Must be in .eps format!
Use “convert” (unix).

drawing your own pictures

test.tex (T:\) - GVIM

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```
\documentclass[12pt,twocolumn]{article}
\begin{document}
\setlength{\unitlength}{1cm}
\begin{picture}(5,5)
\thicklines
\put(2,2){\circle{.5}}
\put(2,2){\circle*{.1}}
\put(2.2,2.2){\vector(1,1){.4}}
\put(3,2){\circle{.5}}
\put(3,2){\circle*{.1}}
\put(3,1.75){\line(0,-1){.5}}
\put(2.75,1.5){\line(1,0){.5}}
\qbezier(2,1.2)(2.5,.5)(3,1.2)
\end{picture}
\end{document}
```

Yap 0.98n - [test.dvi]

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