Using fonts in PostScript

This note will tell you how to place text in your pictures. It is a relatively simple process. The basic principle is that PostScript treats letters as paths.

First you must decide which font you are going to use. There is a limited choice of fonts guaranteed to be available on all implementations. The choice is, roughly, from this list: Times-Roman, Times-Italic, Times-Bold, Times-BoldItalic, Helvetica, Helvetica-Oblique, Helvetica-Bold, Palatino, Courier, Courier-Bold, Palatino, Palatino-Bold, Symbol.

The Helvetica fonts have no serifs, and display well on a computer. The Symbol font contains Greek letters.

Then you decide what scale you are going to use it at. With the command **`scalefont`**, you set the vertical size of the letters in terms of the current unit.

Finally you apply the command **`setfont`**.

If the current unit is one inch, for example, this will give you letters $1/4''$ high:

```
/Helvetica-Bold findfont
0.25 scalefont
setfont
```

To put a sequence of letters on a page, you move to the spot you want the text to begin, and then use the **`show`** command. The text itself is enclosed in parentheses.

```
0 0 moveto
(Mathematics 308) show
```

after the previous command sequence will give you

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To print out the value of a variable, you must convert the variable to a string with the command **`cvs`**, using an empty string of sufficient size to hold the variable's value.

```
0 0 moveto
(x = ) show
x (       ) cvi
```

will produce this, if $x = 3$:

x = 3

Scaling of a font is special to the font, but scaling the figure will affect the font also. So will general coordinate changes. You can get interesting effects.

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By choosing the right affine transformation, you can simulate fonts written in 3D and projected onto the page.