Script fonts for mathematical use available to LaTeX users

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This short sampler document is mostly taken from an answer provided to me for the UK TUG FAQ by Anthony Goreham.

1 Default script fonts

The `\mathcal` command gives us:

$$\mathcal{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$

Caveat: The AMS Postscript Type 1 versions of the Computer Modern fonts (which are used for the Postscript and PDF distributions of this document) are based on Knuth's 'old' shape for the letter "T": compare the current (Metafont) version — $\mathcal{T}$ with the Type 1 version — $\mathcal{T}$

2 Euler script fonts

The package `eucal` changes the definition of `\mathcal` to give us:

$$\mathcal{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$

3 Ralph Smith's Formal Script

The package `mathrsfs` gives us a new command `\mathscr`, and with that we get

$$\mathscr{A\,B\,C\,D\,E\,F\,G\,H\,I\,J\,K\,L\,M\,N\,O\,P\,Q\,R\,S\,T\,U\,V\,W\,X\,Y\,Z}$$

4 Using the Adobe Zapf Chancery font

There's no defined package for this rather pleasing font. To get the font at its default size, one may say (in the document preamble):

```
\DeclareMathAlphabet{\mathpzc}{OT1}{pzc}{m}{it}
```

which declares a command `\mathpzc` which give us:

$$\mathpzc{ABCDEFGHIJKLMNOPQRSTUVWXYZ}$$

which (in Anthony Goreham's view) may seem a bit large. He gives a recipe for producing a smaller version, in the FAQ answer.