Example diagrams for maps

There's a ton of info on the interweb about creating diagrams like the ones in this document. Here are some nice guides with other great examples:

- https://pdp7.org/blog/2011/02/how-to-draw-commutative-diagrams-in-latex-with-tikz/ (used for example in Figure 3)
- http://www.jmilne.org/not/Mtikz.pdf
- http://texdoc.net/texmf-dist/doc/latex/tikz-cd/tikz-cd-doc.pdf

Most of the figures shown here use the following tikzpicture options:

[node distance=2cm, auto, scale=2]

Some or all of these option values could have been set once and for all at the top of the document using a command like

\tikzset{node distance=2cm, auto, scale=2}

I chose not to do this here in case someone wants to extract just one of these figures and insert it into their document.

FIGURE 1. some bijections and a commutative diagram

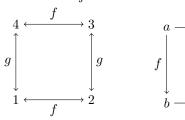


FIGURE 2. more commutative diagrams

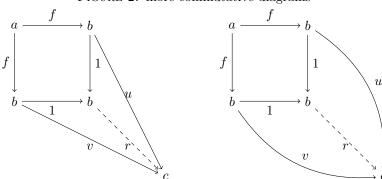


FIGURE 3. created using reference nodes without specifying any coordinates

