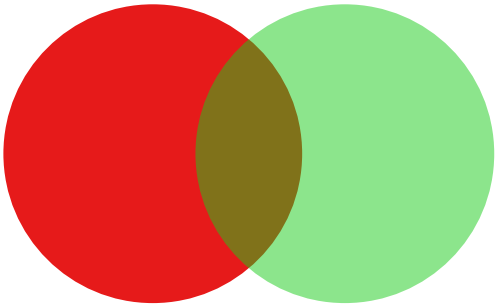
The space a page mixes its colours in

Where a half-transparent colour lies over another, the software showing the page works out the colour of the overlap, and the result depends on the numbers it works with. Mixed in the numbers as written, red and green give a dull olive; mixed in linear light, the way light itself adds up, they give a brighter yellow. Every page of this document says which colour space its marks are mixed in: a calibrated RGB in linear light. Software that honours the request gives each overlap the same colour, on screen as on paper, whatever space each mark was painted in.

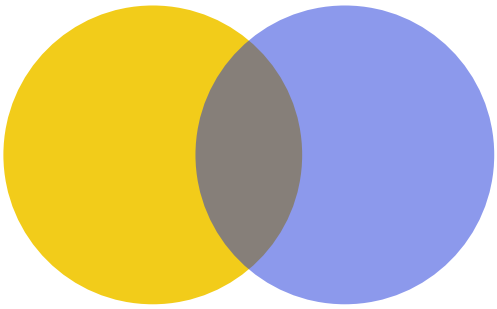
Red, then green at half opacity



Mixed in linear light, as every page here asks: the overlap in software that honours the request.

Mixed in the numbers as written: the overlap in software that ignores it.

Yellow, then blue at half opacity



Mixed in linear light, as every page here asks: the overlap in software that honours the request.

Mixed in the numbers as written: the overlap in software that ignores it.

What the file writes

/Type /Group /S /Transparency /CS [/CalRGB << /Gamma [1 1 1] ... >>] /I true

Each page carries a transparency group. /S /Transparency names it, /CS points at the space the mixing is done in, and /I true starts the page from nothing rather than from what lies behind it: that changes nothing on a sheet printed alone, and matters once the page is placed onto another. The setting holds for every page of the document; the half opacity of each green or blue disc comes from its own graphics state, /ca 0.5.