

- `r1-r3`: the last three pages of the document in reverse order

Starting in qpdf version 8.3, you can specify the **--collate** option. Note that this option is specified outside of **--pages ... --**. When **--collate** is specified, it changes the meaning of **--pages** so that the specified files, as modified by page ranges, are collated rather than concatenated. For example, if you add the files *odd.pdf* and *even.pdf* containing odd and even pages of a document respectively, you could run **qpdf --collate odd.pdf --pages odd.pdf even.pdf --all.pdf** to collate the pages. This would pick page 1 from odd, page 1 from even, page 2 from odd, page 2 from even, etc. until all pages have been included. Any number of files and page ranges can be specified. If any file has fewer pages, that file is just skipped when its pages have all been included. For example, if you ran **qpdf --collate --empty --pages a.pdf 1-5 b.pdf 6-4 c.pdf r1 -- out.pdf**, you would get the following pages in this order:

- a.pdf page 1
- b.pdf page 6
- c.pdf last page
- a.pdf page 2
- b.pdf page 5
- a.pdf page 3
- b.pdf page 4
- a.pdf page 4
- a.pdf page 5

Starting in qpdf version 8.3, when you split and merge files, any page labels (page numbers) are preserved in the final file. It is expected that more document features will be preserved by splitting and merging. In the mean time, semantics of splitting and merging vary across features. For example, the document's outlines (bookmarks) point to actual page objects, so if you select some pages and not others, bookmarks that point to pages that are in the output file will work, and remaining bookmarks will not work. A future version of **qpdf** may do a better job at handling these issues. (Note that the qpdf library already contains all of the APIs required in order to implement this in your own application if you need it.) In the mean time, you can always use **--empty** as the primary input file to avoid copying all of that from the first file. For example, to take pages 1 through 5 from a *infile.pdf* while preserving all metadata associated with that file, you could use

```
qpdf infile.pdf --pages . 1-5 -- outfile.pdf
```

If you wanted pages 1 through 5 from *infile.pdf* but you wanted the rest of the metadata to be dropped, you could instead run

```
qpdf --empty --pages infile.pdf 1-5 -- outfile.pdf
```

If you wanted to take pages 1–5 from *file1.pdf* and pages 11–15 from *file2.pdf* in reverse, you would run

```
qpdf file1.pdf --pages file1.pdf 1-5 . 15-11 -- outfile.pdf
```

If, for some reason, you wanted to take the first page of an encrypted file called *encrypted.pdf* with password *pass* and repeat it twice in an output file, and if you wanted to drop document-level metadata but preserve encryption, you would use

```
qpdf --empty --copy-encryption=encrypted.pdf --encryption-file-password=pass  
--pages encrypted.pdf --password=pass 1 ./encrypted.pdf --password=pass 1 --
```