

A note at the foot of the page

A footnote is a paragraph element like any other run of text¹, so it goes wherever a run can go: in a plain paragraph, inside formatted text, or inside a hyperlink - **here inside a bold run**².

The mark in the running text is drawn as a superscript, at the reduced size the font asks for. The note itself is not part of this paragraph and takes no room in it: it is laid out separately and drawn in a band at the foot of the page.

A note is not a string. Footnote.Elements is block content, so a note can hold more than one paragraph³, and a table or an image as readily as a paragraph.

Room for the note comes off the page before the paragraph carrying its mark is laid out, so the page breaks where it should and the body text never runs into the block. That is the whole of the layout problem, and it is why a footnote is a feature rather than a line of drawing code.

A note can carry a mark of the caller's own instead of a number*, which is what Footnote.Reference is for.

The numbering carries on regardless⁴.

¹ This is the note. It is attached to the word before the mark, and it appears at the foot of whichever page that word ends up on.

² Attached from inside a FormattedText, and numbered in reading order.

³ The first paragraph of a note that has two. Everything PinataLayout can put in a section can go in here.

The second. Both are laid out into a column the width of the text above, indented by the width of the mark, so the mark stands in the margin and the lines all line up.

* Marked with an asterisk rather than a number, by setting Reference. A note marked this way is left out of the counting, so the numbers around it do not skip.

⁴ The fourth note, and the third number - the starred one did not count.

Five ways to mark a note

FootnoteNumberStyle decides what the generated mark looks like. It is a document-wide setting, so the three notes below are all in the style named at the end of this sentence: Arabic.

Three notes in a row⁵, one after another⁶, so the sequence is visible⁷.

The five values are Arabic (1, 2, 3), LowercaseLetter (a, b, c), UppercaseLetter (A, B, C), LowercaseRoman (i, ii, iii) and UppercaseRoman (I, II, III). FootnoteStartingNumber moves where the sequence begins; left alone it starts at one, because the property's own default is zero and a first note marked "0" would be a strange thing to print.

⁵ The first.

⁶ The second.

⁷ The third.

Where the block sits on the page

FootnoteLocation has two values. BottomOfPage - the default, and what every page of this document uses - pins the block to the foot of the text area however little the page holds. BeneathText puts it directly under the last thing laid out, which on a page like this one is a long way higher up.

This page stops here⁸.

The note above is at the foot of the sheet, a long way below the line it belongs to, because this document leaves FootnoteLocation alone. Setting it to BeneathText would draw the same note immediately under that line instead, and would change nothing else about this page. The setting belongs to the document rather than to the page, so one document cannot show both - set it and run the demo again to see the other.

Both reserve the same room while the page is being formatted, so neither can collide with the body text. They differ only in where the room that was kept clear is actually used. On a full page the two are the same place.

⁸ Pinned to the foot of the sheet, a long way below the line it belongs to, because this document uses BottomOfPage.

Where the numbering starts again

FootnoteNumberingRule decides what the sequence counts within. RestartContinuous numbers the whole document, which is what this one does and what most reports want. RestartSection begins again at each section. RestartPage begins again on each page.

A note on this page⁹, and another on the next.

RestartPage is the enum's first value and therefore its default, so a document that says nothing gets notes numbered from one on every page. That is rarely what anybody means, and it is the reason this demo sets the rule explicitly at the top.

⁹ Numbered on from every note before it in the document.

The note on the page after¹⁰.

¹⁰ Under RestartContinuous this carries on from the page before. Under the default it would be number one again.