Title

Author

No Institute Given

Hello world!

Theorem 1. *This is a great result. It has an equation:*

$$\sum_{k=1}^{\infty} \frac{1}{k^2} = \frac{\pi^2}{6} \tag{1}$$

The equation number is (1).

Proof (sketch). This is the proof sketch of Theorem 1.

Proof. This is the proof of Theorem 1.

1 Section without Theorems

Since this section does not have any appendix content, it will not appear in the appendix. [1]

2 Section with Some Appendix Content

Example 2.1. *Examples are numbered within a section.*

Not much in the main text.
Hello appendix!

3 Section with Theorems (long)

Theorem 2. *Another great result.*

Proof (sketch). Proof sketch of Theorem 2.

Proof. Proof of Theorem 2.
For some reason, this proof has an inline Lemma:

Lemma 3. *This is the lemma (numbered following the theorem numbering).*

Proof. And this lemma has a proof as well!

This concludes the global proof of Theorem 2.

Theorem 4. *Another great result, without any proof sketch.*

Proof. Proof of Theorem 4. It has two references [2,1].

Theorem 5. *A regular theorem, not repeated.*

Proof. This regular theorem is naturally followed with an inline proof.

Theorem 6. *A repeated theorem, but with two proofs, one in Appendix and one in main text.*

Proof. Main text proof of Theorem 6.

Proof. Appendix proof of Theorem 6.

And now for no particular reason, two isolated proofs in the appendix, written in two different ways:

Proof (Proof of a non-existing result). First with a regular `proof` environment inside a `toappendix` environment.

Proof. Second, with the specific `appendixproof` environment (but then, cannot change the proof name).

4 Last *Section*

Theorem 7 (with note). *Another theorem.*

This theorem does not have a proof, but a discussion in the appendix. `apx-proof` can figure, because of the `theorem` environment that follows, that the proof of the following theorem is not a proof of this theorem.

Theorem 8. *Last theorem, not repeated.*

Proof. Proof, inlined.

References

1. Sergey Brin and Lawrence Page. The anatomy of a large-scale hypertextual Web search engine. *Computer Networks*, 30(1–7):107–117, April 1998.
2. sitemaps.org. Sitemaps XML format. `http://www.sitemaps.org/protocol.php`, February 2008.