

# Title

Author

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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.