Title

Author

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. □

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.

3. SECTION WITH THEOREMS (LONG)

Theorem 2. *Another great result.*

PROOF SKETCH. Proof sketch of Theorem 2. □

Theorem 3. *Another great result, without any proof sketch.*

Theorem 4. *A regular theorem, not repeated.*

PROOF. This regular theorem is naturally followed with an inline proof. □

Theorem 5. *A repeated theorem, but with two proofs, one in Appendix and one in main text.*

PROOF. Main text proof of Theorem 5. □

4. LAST *SECTION*

Theorem 6 (with note)**.** *Another theorem.*

Theorem 7. *Last theorem, not repeated.*

PROOF. Proof, inlined. □

REFERENCES

5. 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.

APPENDIX

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

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

PROOF. This is the proof of Theorem 1. □

A. Material for SECTION WITH SOME APPENDIX CONTENT (Section 2)

Hello appendix!

B. Material for SECTION WITH THEOREMS (LONG) (Section 3)

Theorem 2. *Another great result.*

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

Lemma 8. *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 3. *Another great result, without any proof sketch.*

PROOF. Proof of Theorem 3. It has two references [2, 1]. □

Theorem 5. *A repeated theorem, but with two proofs, one in Appendix and one in main text.*

PROOF. Appendix proof of Theorem 5. □

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). □

C. Material for LAST *SECTION* (Section 4)

Theorem 6 (with note)**.** *Another theorem.*

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