

# Title

Author

Hello world!

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

$$\sum_{k=1}^{\infty} \frac{1}{k^2} = \frac{\pi^2}{6} \quad (1)$$

The equation number is (1).

PROOF SKETCH. This is the proof sketch of Theorem 1.  $\square$

## 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.  $\square$

**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.  $\square$

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

PROOF. Main text proof of Theorem 5.  $\square$

## 4. LAST SECTION

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

**Theorem 7.** *Last theorem, not repeated.*

PROOF. Proof, inlined.  $\square$

## 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.

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## APPENDIX

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

$$\sum_{k=1}^{\infty} \frac{1}{k^2} = \frac{\pi^2}{6} \quad (1)$$

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.