Title

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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. □

1 Section without Theorems

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

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. □

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 [**?**, **?**]. □

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 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.