AMS Proceedings Series Sample

Author One and Author Two

This paper is dedicated to our advisors.

Abstract. This paper is a sample prepared to illustrate the use of the American Mathematical Society’s \LaTeX{} document class \texttt{amsproc} and publication-specific variants of that class for AMS-\LaTeX{} version 1.2.

This is an unnumbered first-level section head
This is an example of an unnumbered first-level heading.

This is a Special Section Head
This is an example of a special section head\textsuperscript{1}.

1. This is a numbered first-level section head
This is an example of a numbered first-level heading.

1.1. This is a numbered second-level section head. This is an example of a numbered second-level heading.

This is an unnumbered second-level section head. This is an example of an unnumbered second-level heading.

1.1.1. This is a numbered third-level section head. This is an example of a numbered third-level heading.

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\textsuperscript{1}Here is an example of a footnote. Notice that this footnote text is running on so that it can stand as an example of how a footnote with separate paragraphs should be written.

And here is the beginning of the second paragraph.
This is an unnumbered third-level section head. This is an example of an unnumbered third-level heading.

**Lemma 1.1.** Let \( f, g \in A(X) \) and let \( E, F \) be cozero sets in \( X \).

1. If \( f \) is \( E \)-regular and \( F \subseteq E \), then \( f \) is \( F \)-regular.
2. If \( f \) is \( E \)-regular and \( F \)-regular, then \( f \) is \( E \cup F \)-regular.
3. If \( f(x) \geq c > 0 \) for all \( x \in E \), then \( f \) is \( E \)-regular.

The following is an example of a proof.

**Proof.** Set \( j(\nu) = \max(I \setminus a(\nu)) - 1 \). Then we have

\[
\sum_{i \in g(\nu)} t_i \sim t_{j(\nu)+1} = \prod_{j=0}^{j(\nu)} (t_{j+1}/t_j).
\]

Hence we have

\[
\prod_{\nu} \left( \sum_{i \in g(\nu)} t_i \right)^{|a(\nu-1)|-|a(\nu)|} \sim \prod_{\nu} \prod_{j=0}^{j(\nu)} (t_{j+1}/t_j)^{|a(\nu-1)|-|a(\nu)|} = \prod_{j \geq 0} (t_{j+1}/t_j)^{\sum_{j(\nu) \geq j} (|a(\nu-1)|-|a(\nu)|)}.
\]

By definition, we have \( a(\nu(j)) \supset c(j) \). Hence, \(|c(j)| = n - j \) implies (5.4). If \( c(j) \notin a \), \( a(\nu(j))c(j) \) and hence we have (5.5).

This is an example of an ‘extract’. The magnetization \( M_0 \) of the Ising model is related to the local state probability \( P(a) : M_0 = P(1) - P(-1) \). The equivalences are shown in Table 1.

| \( f_+(x,k) \) | \( -\infty \) | \( +\infty \) |
|-----------------|-----------------|-----------------|
| \( e^{\sqrt{-1}kx} + s_{12}(k)e^{-\sqrt{-1}kx} \) | \( s_{11}(k)e^{\sqrt{-1}kx} \) | \( s_{11}(k)e^{\sqrt{-1}kx} \) |
| \( f_-(x,k) \) | \( s_{22}(k)e^{-\sqrt{-1}kx} \) | \( e^{-\sqrt{-1}kx} + s_{21}(k)e^{\sqrt{-1}kx} \) |

**Definition 1.2.** This is an example of a ‘definition’ element. For \( f \in A(X) \), we define

\[
Z(f) = \{ E \in Z[X] : f \text{ is } E^c\text{-regular} \}.
\]

**Remark 1.3.** This is an example of a ‘remark’ element. For \( f \in A(X) \), we define

\[
Z(f) = \{ E \in Z[X] : f \text{ is } E^c\text{-regular} \}.
\]

**Example 1.4.** This is an example of an ‘example’ element. For \( f \in A(X) \), we define

\[
Z(f) = \{ E \in Z[X] : f \text{ is } E^c\text{-regular} \}.
\]

**Exercise 1.5.** This is an example of the xca environment. This environment is used for exercises which occur within a section.
The following is an example of a numbered list.

1. First item. In the case where in $G$ there is a sequence of subgroups

$$G = G_0, G_1, G_2, \ldots, G_k = e$$

such that each is an invariant subgroup of $G_i$.

2. Second item. Its action on an arbitrary element $X = \lambda^\alpha X_\alpha$ has the form

$$[e^\alpha X_\alpha, X] = e^\alpha \lambda^\beta [X_\alpha X_\beta] = e^\alpha c_{\alpha \beta}^\gamma \lambda^\beta X_\gamma,$$

(a) First subitem.

$$-2\psi_2(e) = c_{\alpha \gamma}^\delta c_{\beta \delta}^\gamma e^\alpha e^\beta.$$

(b) Second subitem.

(i) First subsubitem. In the case where in $G$ there is a sequence of subgroups

$$G = G_0, G_1, G_2, \ldots, G_k = e$$

such that each subgroup $G_{i+1}$ is an invariant subgroup of $G_i$ and each quotient group $G_{i+1}/G_i$ is abelian, the group $G$ is called solvable.

(ii) Second subsubitem.

(c) Third subitem.

3. Third item.

Here is an example of a cite. See [A].

**Theorem 1.6.** This is an example of a theorem.

**Theorem 1.7 (Marcus Theorem).** This is an example of a theorem with a parenthetical note in the heading.

2. Some more list types

This is an example of a bulleted list.

- $J_g$ of dimension $3g - 3$;
- $E_g^\alpha = \{\text{Pryms of double covers of } C \}$ with normalization of $C$ hyperelliptic of genus $g - 1$ of dimension $2g$;
• $E^2_{1,g-1} = \{\text{Pryms of double covers of } C = \square^H_{g-1} \text{ with } H \text{ hyperelliptic of}\}
\text{genus } g-2\} \text{ of dimension } 2g-1$:

• $P^2_{t,g-t}$ for $2 \leq t \leq g/2 = \{\text{Pryms of double covers of } C = \square^{C'}_{g-t} \text{ with } g(C') = t-1 \text{ and } g(C'') = g-t-1\} \text{ of dimension } 3g-4$.

This is an example of a ‘description’ list.

**Zero case:** $\rho(\Phi) = \{0\}$.

**Rational case:** $\rho(\Phi) \neq \{0\}$ and $\rho(\Phi)$ is contained in a line through 0 with rational slope.

**Irrational case:** $\rho(\Phi) \neq \{0\}$ and $\rho(\Phi)$ is contained in a line through 0 with irrational slope.

**References**

[A] T. Aoki, *Calcul exponentiel des opérateurs microdifférentiels d’ordre infini. I*, Ann. Inst. Fourier (Grenoble) 33 (1983), 227–250.

[B] R. Brown, *On a conjecture of Dirichlet*, Amer. Math. Soc., Providence, RI, 1993.

[D] R. A. DeVore, *Approximation of functions*, Proc. Sympos. Appl. Math., vol. 36, Amer. Math. Soc., Providence, RI, 1986, pp. 34–56.

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