## Technical details on texyc identifier extraction

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#### 1 Introduction

This document describes which mathematical symbols are identified as identifiers. In general every single Latin letter [a-zA-Z] is regarded as identifier. In addition, we accept multi-letter-subscripts that match [0-9a-zA-Z]+, such as  $a_0$  but also  $\varepsilon_{ijk}$ . Moreover, the Literals described in section ??, and the Identifier variants (section ??) are supported.

# 2 Literals

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The following literals are supported:
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```
\aleph is rendered as \aleph
\alpha is rendered as \alpha
\amalg is rendered as II
\backepsilon is rendered as 3
\Bbbk is rendered as \mathbb{k}
\beta is rendered as \beta
\beth is rendered as \Box
\chi is rendered as \chi
\complement is rendered as {f C}
\daleth is rendered as \
\delta is rendered as \delta
\Delta is rendered as \Delta
\forall digamma is rendered as F
\ell is rendered as \ell
\emptyset is rendered as \emptyset
\epsilon is rendered as \epsilon
\eta is rendered as \eta
\eth is rendered as ð
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\Finv is rendered as ∃
\flat is rendered as b
\Game is rendered as ∂
\gamma is rendered as \gamma
\Gamma is rendered as \Gamma
\gimel is rendered as J
\hslash is rendered as \hbar
\imath is rendered as i
\infty is rendered as \infty
\intercal is rendered as T
\iota is rendered as \iota
\jmath is rendered as j
\kappa is rendered as \kappa
\lambda is rendered as \lambda
\Lambda is rendered as \Lambda
\mho is rendered as \mho
\mu is rendered as \mu
\natural is rendered as \( \bar{1} \)
\nu is rendered as \nu
\omega is rendered as \omega
\Omega is rendered as \Omega
\P is rendered as \P
\phi is rendered as \phi
\Phi is rendered as \Phi
\pi is rendered as \pi
\Pi is rendered as \Pi
\pitchfork is rendered as ₼
\psi is rendered as \psi
\Psi is rendered as \Psi
\rho is rendered as \rho
\S is rendered as \S
\sigma is rendered as \sigma
\Sigma is rendered as \Sigma
\tau is rendered as \tau
\theta is rendered as \theta
\Theta is rendered as \Theta
\top is rendered as \top
\varepsilon is rendered as \varepsilon
\forallvarkappa is rendered as \varkappa
\varnothing is rendered as Ø
\varphi is rendered as \varphi
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\varpi is rendered as \varpi \varrho is rendered as \varrho \varsigma is rendered as \varsigma \vartheta is rendered as \vartheta \wp is rendered as \varphi \xi is rendered as \xi \Xi is rendered as \Xi \zeta is rendered as \zeta
```

### 3 Identifier variants

The following variants are supported<sup>1</sup>: \acute applied on x, X is rendered as x, X\bar applied on x, X is rendered as  $\bar{x}, \bar{X}$ \bcancel applied on x, X is rendered as x, X\bmod applied on x, X is rendered as mod x, mod X\boldsymbol applied on x, X is rendered as x, X\breve applied on x, X is rendered as  $\check{x}, \check{X}$ \cancel applied on x, X is rendered as x, X\check applied on x, X is rendered as  $\check{x}, \check{X}$ \ddot applied on x, X is rendered as  $\ddot{x}, \ddot{X}$ \dot applied on x, X is rendered as x, X\emph applied on x, X is rendered as x, X\grave applied on x, X is rendered as  $\hat{x}, \hat{X}$ \hat applied on x, X is rendered as  $\hat{x}, \hat{X}$ \mathbb applied on x, X is rendered as x, X\mathbf applied on x, X is rendered as  $\mathbf{x}, \mathbf{X}$ \mathbin applied on x, X is rendered as x, X\mathcal applied on x, X is rendered as  $\S, \mathcal{X}$ \mathclose applied on x, X is rendered as x, X\mathfrak applied on x, X is rendered as  $\mathfrak{x}, \mathfrak{X}$ \mathit applied on x, X is rendered as x, X\mathop applied on x, X is rendered as x, X\mathopen applied on x, X is rendered as x, X\mathord applied on x, X is rendered as x, X\mathpunct applied on x, X is rendered as x, X\mathrel applied on x, X is rendered as x, X\mathrm applied on x, X is rendered as x, X

<sup>&</sup>lt;sup>1</sup>Note that \mathcal is not available for lowercase Latin letters.

```
\mathsf applied on x, X is rendered as x, X
\mathtt applied on x, X is rendered as x, X
\operatorname applied on x, X is rendered as x, X
\overleftarrow applied on x, X is rendered as \overleftarrow{x}, \overleftarrow{X}
\overleftrightarrow applied on x, X is rendered as \overleftrightarrow{x}, \overleftrightarrow{X}
\overline applied on x, X is rendered as \overline{x}, \overline{X}
\overrightarrow applied on x, X is rendered as \overrightarrow{x}, \overrightarrow{X}
\textbf applied on x, X is rendered as \mathbf{x}, \mathbf{X}
\textit applied on x, X is rendered as x, X
\textrm applied on x, X is rendered as x, X
\textsf applied on x, X is rendered as x, X
\texttt applied on x, X is rendered as x, X
\tilde applied on x, X is rendered as \tilde{x}, \tilde{X}
\underline applied on x, X is rendered as \underline{x}, \underline{X}
\vec applied on x, X is rendered as \vec{x}, \vec{X}
\widehat applied on x, X is rendered as \widehat{x}, \widehat{X}
\widetilde applied on x, X is rendered as \widetilde{x}, \widetilde{X}
\xcancel applied on x, X is rendered as x, X
\xleftarrow applied on x, X is rendered as \stackrel{x}{\leftarrow}, \stackrel{X}{\leftarrow}
\xrightarrow applied on x, X is rendered as \xrightarrow{x}, \xrightarrow{X}
\Bbb applied on x, X is rendered as x, X
\bold applied on x, X is rendered as \mathbf{x}, \mathbf{X}
```