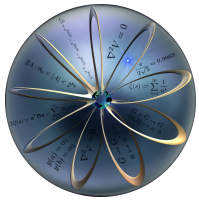

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LaTeXsymbol for Cauchy principal value

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The usual symbol (dashed integral) used to denote Cauchy's principal value of an integral can be created in LaTeX through macros.[1] These one are given by the following instructions, which must be included on the *preamble*.

```
\def\Xint#1{\mathchoice
   {\XXint\displaystyle\textstyle{#1}}%
   {\XXint\textstyle\scriptstyle{#1}}%
   {\XXint\scriptstyle\scriptscriptstyle{#1}}%
   {\XXint\scriptscriptstyle\scriptscriptstyle{#1}}%
   \!\int}
\def\XXint#1#2#3{{\setbox0=\hbox{$#1{#2#3}{\int}$}
     \vcenter{\hbox{$#2#3$}}\kern-.5\wd0}}
\def\ddashint{\Xint=}
\def\dashint{\Xint-}
```

The commands to execute those macros are "*dashint*" and "*ddashint*" for single dash and double dash, respectively. Let us expose a few examples.

- $$⨍\!\!\!\!\!\!-_{\Omega} F(\zeta,\eta)d\zeta d\eta$$
- $$⨍\!\!\!\!\!\!-_{z_0}^{z} f(\zeta)d\zeta$$
- $$Ei(z) = -⨍\!\!\!\!\!\!-_{-z}^{\infty} \frac{e^{-\zeta}}{\zeta}d\zeta = ⨍\!\!\!\!\!\!-_{-\infty}^{z} \frac{e^{\zeta}}{\zeta}d\zeta, \quad \Re z > 0, \quad \text{(exponential integral)}$$
- $$li(z) = ⨍\!\!\!\!\!\!-_{0}^{z} \frac{d\zeta}{\log\zeta} \equiv Ei(\log z),\ \Re z > 1, \quad \text{(logarithmic integral)}$$
- $$\Gamma(z)\Gamma(1-z) = -z\Gamma(-z)\Gamma(z) = ⨍\!\!\!\!\!\!-_{0}^{\infty} \frac{\zeta^{z-1}}{\zeta+1}d\zeta = \pi\csc\pi z, \quad 0 < \Re z < 1, \quad \text{(Gamma function re}$$

[1] *UK* List of TeX is a reference.