Cassiopeia 2.3.3 ReleaseNotes

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Contents

Earlier versions of Cassiopeia already worked on MasOSX El Capitan but Front-Base could not automatically be installed on Apples latest OS due to an incompatibilty issue with the referenced package. As of v2.3.3 Cassiopeia checks the OS version and selects the correct package for a seamless installation of supporting components.

1 New partial dif part

Earlier versions of Cassiopeia knew the full derivation part accessible via Ctrl-d (in formula mode).

$$\frac{d\,\blacksquare}{\square}$$

After filling out the two cells this looked like

$$\frac{dy(x)}{dx}$$

or

$$\frac{d^2 y(x)}{dx^2}$$

One could also enter something like this

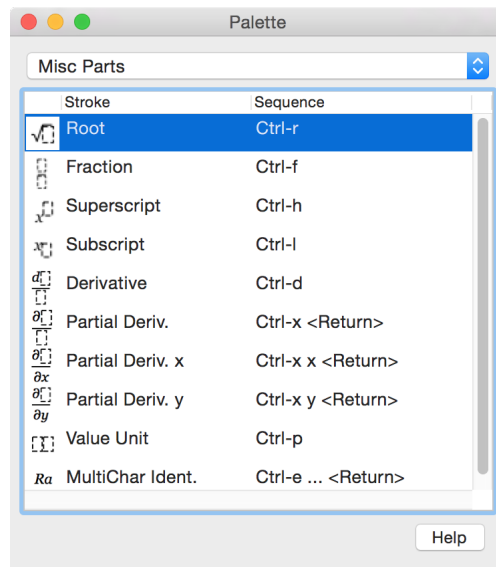$$\frac{\partial \vec{A}(x,y,z,t)}{\partial x}$$

by just typing dx in the denominator cell. Cassiopeia realised that the function in the enumerator cell depended on multiple variables and therefore automatically switched to a partial differential. However, it was a litte cumbersome to enter something like this

$$\frac{\partial \vec{A}}{\partial t}$$

in earlier versions. As of v2.3.3 this can easiliy be achieved by issuing the following key sequence:

<div align="center">

Ctrl-x t **\<Return\>** A Ctrl-a v

</div>

Please also note the updated *Misc Parts* pane of the palette.

	Palette	
Misc Parts		
Stroke		Sequence
√☐ Root		Ctrl-r
Fraction		Ctrl-f
Superscript		Ctrl-h
Subscript		Ctrl-l
Derivative		Ctrl-d
Partial Deriv.		Ctrl-x \<Return\>
Partial Deriv. x		Ctrl-x x \<Return\>
Partial Deriv. y		Ctrl-x y \<Return\>
Value Unit		Ctrl-p
Ra MultiChar Ident.		Ctrl-e ... \<Return\>

Help

2   Upgradable function part

Earlier versions allowed to upgrade integral parts with Ctrl-y. If you had inserted an integral part with Ctrl-i i

$$y \quad = \quad \int \Box \, d\Box$$

you could select this part with cursur keys

$$y \quad = \quad \int \Box \, d\Box$$

and then press Ctrl-y to get additional cells for the limits.

$$y \;=\; \int \Box\, d\Box$$

This feature is available for funtion parts as well now. This e.g. allows to attach a tends to expression to lim. In an equation type d i v A Ctrl-a v Cursor-Up Cursor-Right = l i m to get

$$\operatorname{div} \vec{A} \;=\; \lim \;\blacksquare$$

Type some more stuff like Ctrl-f 1 Cursor-Right ... to make this expression a bit more interesting

$$\operatorname{div} \vec{A} \;=\; \lim \left(\frac{1}{V} \int \vec{A}\, d\vec{S} \right)$$

Now select the lim part with the cursor keys

$$\operatorname{div} \vec{A} \;=\; \lim \left(\frac{1}{V} \int \vec{A}\, d\vec{S} \right)$$

and press Ctrl-y to upgrade.

$$\operatorname{div} \vec{A} \;=\; \lim_{\Box} \frac{1}{V} \int \vec{A}\, d\vec{S}$$

A new cell is added. Use that to enter a tends to expression, e.g. V Ctrl-b > 0.

$$\operatorname{div} \vec{A} \;=\; \lim_{V \to 0} \frac{1}{V} \int \vec{A}\, d\vec{S}$$

This gives us the following in the LaTeXed printout (Command-p):

3

$$\frac{\partial \vec{A}(x, y, z, t)}{\partial x}$$

$$y = \int_0^R 3x^2 + 2x \ dx$$

$$\operatorname{div} \vec{A} = \lim_{V \to 0} \frac{1}{V} \int \vec{A} \ d\vec{S}$$

3 Support

If you encounter any trouble during the installation or usage of Cassiopeia please feel free to contact us at *support@advanced-science.com*. We will be happy to assist.

We have also setup a yahoo group that is supposed to be used for discussing Cassiopeia related how-to topics. Simply post your issue on the cassiopeia-group.

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