ソースコード 1 derivative パッケージの setup 例 1

```
\derivativesetup{
        d = roman,
}
```

表1 コード1による設定を適用した場合の挙動

No	command	expected	result
1	\odr{x}{f}	$\dfrac{\mathrm{d}f}{\mathrm{d}x}$	$\dfrac{\mathrm{d}f}{\mathrm{d}x}$
2	\odr{x}[2]{f}	$\dfrac{\mathrm{d}^2 f}{\mathrm{d}x^2}$	$\dfrac{\mathrm{d}^2 f}{\mathrm{d}x^2}$
3	\odr{x}[n]{f}	$\dfrac{\mathrm{d}^n f}{\mathrm{d}x^n}$	$\dfrac{\mathrm{d}^n f}{\mathrm{d}x^n}$
4	\odr{x_1}{f}	$\dfrac{\mathrm{d}f}{\mathrm{d}x_1}$	$\dfrac{\mathrm{d}f}{\mathrm{d}x_1}$
5	\odr{x_1}{y_2}	$\dfrac{\mathrm{d}y_2}{\mathrm{d}x_1}$	$\dfrac{\mathrm{d}y_2}{\mathrm{d}x_1}$
6	\odr{t}{\bm{u}}	$\dfrac{\mathrm{d}\boldsymbol{u}}{\mathrm{d}t}$	$\dfrac{\mathrm{d}\boldsymbol{u}}{\mathrm{d}t}$
7	\odr{\bm{x}}{f}	$\dfrac{\mathrm{d}f}{\mathrm{d}\boldsymbol{x}}$	$\dfrac{\mathrm{d}f}{\mathrm{d}\boldsymbol{x}}$

ソースコード 2 derivative パッケージの setup 例 2

```
\derivativesetup{
        d = italic,
}
```

表2 コード2による設定を適用した場合の挙動

No	command	expected	result
1	\odr{x}{f}	$\dfrac{df}{dx}$	$\dfrac{df}{dx}$
2	\odr{x}[2]{f}	$\dfrac{d^2 f}{dx^2}$	$\dfrac{d^2 f}{dx^2}$
3	\odr{x}[n]{f}	$\dfrac{d^n f}{dx^n}$	$\dfrac{d^n f}{dx^n}$
4	\odr{x_1}{f}	$\dfrac{df}{dx_1}$	$\dfrac{df}{dx_1}$
5	\odr{x_1}{y_2}	$\dfrac{dy_2}{dx_1}$	$\dfrac{dy_2}{dx_1}$
6	\odr{t}{\bm{u}}	$\dfrac{d\boldsymbol{u}}{dt}$	$\dfrac{d\boldsymbol{u}}{dt}$
7	\odr{\bm{x}}{f}	$\dfrac{df}{d\boldsymbol{x}}$	$\dfrac{df}{d\boldsymbol{x}}$

No	command	expected	result
1	`\pdr{{x}{f}}`	$\dfrac{\partial f}{\partial x}$	$\dfrac{\partial f}{\partial x}$
2	`\pdr{{x}[2]{f}}`	$\dfrac{\partial^2 f}{\partial x^2}$	$\dfrac{\partial^2 f}{\partial x^2}$
3	`\pdr{{x}{y}{f}}`	$\dfrac{\partial^2 f}{\partial x \partial y}$	$\dfrac{\partial^2 f}{\partial x \partial y}$
4	`\pdr{{x}[2]{y}{f}}`	$\dfrac{\partial^3 f}{\partial x^2 \partial y}$	$\dfrac{\partial^3 f}{\partial x^2 \partial y}$
5	`\pdr{{x}[2]{y}[3]{f}}`	$\dfrac{\partial^5 f}{\partial x^2 \partial y^3}$	$\dfrac{\partial^5 f}{\partial x^2 \partial y^3}$
6	`\pdr{{x_1}{y}}`	$\dfrac{\partial y}{\partial x_1}$	$\dfrac{\partial y}{\partial x_1}$
7	`\pdr{{x}{f_2}}`	$\dfrac{\partial f_2}{\partial x}$	$\dfrac{\partial f_2}{\partial x}$
8	`\pdr{{x_1}{t}{f}}`	$\dfrac{\partial^2 f}{\partial x_1 \partial t}$	$\dfrac{\partial^2 f}{\partial x_1 \partial t}$
9	`\pdr{{x_1}{x_2}{f}}`	$\dfrac{\partial^2 f}{\partial x_1 \partial x_2}$	$\dfrac{\partial^2 f}{\partial x_1 \partial x_2}$
10	`\pdr{{\bm{x}}{f}}`	$\dfrac{\partial f}{\partial \boldsymbol{x}}$	$\dfrac{\partial f}{\partial \boldsymbol{x}}$
11	`\pdr{{\bm{x}}{\bm{y}}{f}}`	$\dfrac{\partial^2 f}{\partial \boldsymbol{x} \partial \boldsymbol{y}}$	$\dfrac{\partial^2 f}{\partial \boldsymbol{x} \partial \boldsymbol{y}}$
12	`\pdr{{\bm{x}_1}{\bm{y}_2}{f}}`	$\dfrac{\partial^2 f}{\partial \boldsymbol{x}_1 \partial \boldsymbol{y}_2}$	$\dfrac{\partial^2 f}{\partial \boldsymbol{x}_1 \partial \boldsymbol{y}_2}$
13	`\pdr{{x}[2]{\bm{u}}}`	$\dfrac{\partial^2 \boldsymbol{u}}{\partial x^2}$	$\dfrac{\partial^2 \boldsymbol{u}}{\partial x^2}$
14	`\pdr{{x}{\bm{u}}}+\pdr{{y}{\bm{u}}}`	$\dfrac{\partial \boldsymbol{u}}{\partial x} + \dfrac{\partial \boldsymbol{u}}{\partial y}$	$\dfrac{\partial \boldsymbol{u}}{\partial x} + \dfrac{\partial \boldsymbol{u}}{\partial y}$
15	`\pdr{{x}{}}`	$\dfrac{\partial}{\partial x}$	$\dfrac{\partial}{\partial x}$
16	`\pdr{{x_1}{}}`	$\dfrac{\partial}{\partial x_1}$	$\dfrac{\partial}{\partial x_1}$
17	`\pdr{{\bm{x}}{}}`	$\dfrac{\partial}{\partial \boldsymbol{x}}$	$\dfrac{\partial}{\partial \boldsymbol{x}}$

No	command	expected	result
1	`\pdr*{{x}[n]{f}[n]}`	$\dfrac{\partial^n f}{\partial x^n}$	$\dfrac{\partial^n f}{\partial x^n}$
2	`\pdr*{{x}[n]{}[n]}`	$\dfrac{\partial^n}{\partial x^n}$	$\dfrac{\partial^n f}{\partial x^n}$
3	`\pdr*{{x}[n]{y}[m]{f}[n+m]}`	$\dfrac{\partial^{n+m} f}{\partial x^n \partial y^m}$	$\dfrac{\partial^{n+m} f}{\partial x^n \partial y^m}$
4	`\pdr*{{x}[1]{y}[1]{f}[1+1]}`	$\dfrac{\partial^{1+1} f}{\partial x^1 \partial y^1}$	$\dfrac{\partial^{1+1} f}{\partial x^1 \partial y^1}$
5	`\pdr*{{x}{y}[n]{f}[n+1]}`	$\dfrac{\partial^{n+1} f}{\partial x \partial y^n}$	$\dfrac{\partial^{n+1} f}{\partial x \partial y^n}$

No	command	expected	result
1	`\pdrr{{x}{f}}`	$\partial_x f$	$\partial_x f$
2	`\pdrr{{i}{j}{f}}`	$\partial_i \partial_j f$	$\partial_i \partial_j f$
3	`\pdrr{{i}*{j}{f}}`	$\partial_i \partial^j f$	$\partial_i \partial^j f$
4	`\pdrr{*{i}{j}{f}}`	$\partial^i \partial_j f$	$\partial^i \partial_j f$

ソースコード 3　derivative パッケージの setup 例 3

```
\derivativesetup{
        nabla-deco-1 = ',
        nabla-deco-2 = '',
        nabla-deco-3 = _{\bm{r}}'''},
        laplace = delta ,
}
```

表 3　コード 3 による設定を適用した場合の挙動

No	command	expected	result
1	\grad{f}	∇f	∇f
2	\div\bm{v}	$\nabla \cdot \boldsymbol{v}$	$\nabla \cdot \boldsymbol{v}$
3	\rot\bm{v}	$\nabla \times \boldsymbol{v}$	$\nabla \times \boldsymbol{v}$
4	\curl\bm{v}	$\nabla \times \boldsymbol{v}$	$\nabla \times \boldsymbol{v}$
5	\laplace{f}	$\nabla^2 f$	Δf
6	\laplaced{f}	Δf	Δf
7	\laplacen{f}	$\nabla^2 f$	$\nabla^2 f$
8	\hesse{f}	$\nabla \otimes \nabla f$	$\nabla \otimes \nabla f$
9	\gradr{f}	$\mathrm{grad}\, f$	$\mathrm{grad}\, f$
10	\divr{\bm{v}}	$\mathrm{div}\, \boldsymbol{v}$	$\mathrm{div}\, \boldsymbol{v}$
11	\rotr{\bm{v}}	$\mathrm{rot}\, \boldsymbol{v}$	$\mathrm{rot}\, \boldsymbol{v}$
12	\curlr{\bm{v}}	$\mathrm{curl}\, \boldsymbol{v}$	$\mathrm{curl}\, \boldsymbol{v}$
13	\grad'{f}	$\nabla' f$	$\nabla' f$
14	\grad''{f}	$\nabla'' f$	$\nabla'' f$
15	\grad'''(\frac{f}{g})	$\nabla_{\boldsymbol{r}'''} \left(\dfrac{f}{g} \right)$	$\nabla_{\boldsymbol{r}'''} \left(\dfrac{f}{g} \right)$
16	\gradr''[f]	$\mathrm{grad}'' \left[f \right]$	$\mathrm{grad}'' \left[f \right]$
17	\hesse''!{f}	$\nabla'' \otimes \nabla'' \{f\}$	$\nabla'' \otimes \nabla'' \{f\}$