Markdown Math Macro definition

The latex command source

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Latex command definition source

```
\newcommand{\bm}[1]{\boldsymbol{#1}}

\newcommand{\sign}{\operatorname{sign}} % \DeclareMathOperator{\sign}{sign}
\newcommand{\Tr}{\operatorname{Tr}} % \DeclareMathOperator{\Tr}{Tr}



\newcommand{\E}{\mathbb{E}}
\newcommand{\KL}{D_\mathrm{KL}}
\newcommand{\NormalDist}{\mathcal{N}}
\newcommand{\diag}{\mathrm{diag}}

\newcommand{\Ls}{\mathcal{L}}
\newcommand{\R}{\mathbb{R}}
\newcommand{\emp}{\tilde{p}}
\newcommand{\lr}{\alpha}
\newcommand{\reg}{\lambda}
\newcommand{\rect}{\mathrm{rectifier}}
\newcommand{\softmax}{\mathrm{softmax}}
\newcommand{\sigmoid}{\sigma}
\newcommand{\softplus}{\zeta}
\newcommand{\Var}{\mathrm{Var}}
\newcommand{\standarderror}{\mathrm{SE}}
\newcommand{\Cov}{\mathrm{Cov}}
```

```
\newcommand{\tran}{^\top}
\newcommand{\inv}{^{-1}}
\newcommand{\diff}{ \mathrm{d}}

% % Vectors
\newcommand{\vzero}{\bm{0}}
\newcommand{\vone}{\bm{1}}
\newcommand{\vmu}{\bm{\mu}}
\newcommand{\vnu}{\bm{\nu}}
\newcommand{\vtheta}{\bm{\theta}}

\renewcommand{\va}{\bm{a}}
\renewcommand{\vb}{\bm{b}}
% \newcommand{\va}{\bm{a}}
% \newcommand{\vb}{\bm{b}}
\newcommand{\vc}{\bm{c}}
\newcommand{\vd}{\bm{d}}
\newcommand{\ve}{\bm{e}}
\newcommand{\vf}{\bm{f}}
\newcommand{\vg}{\bm{g}}
\newcommand{\vh}{\bm{h}}
\newcommand{\vi}{\bm{i}}
\newcommand{\vj}{\bm{j}}
\newcommand{\vk}{\bm{k}}
\newcommand{\vl}{\bm{l}}
\newcommand{\vm}{\bm{m}}
\newcommand{\vn}{\bm{n}}
\newcommand{\vo}{\bm{o}}
\newcommand{\vp}{\bm{p}}
\newcommand{\vq}{\bm{q}}
\newcommand{\vr}{\bm{r}}
\newcommand{\vs}{\bm{s}}
\newcommand{\vt}{\bm{t}}
\newcommand{\vu}{\bm{u}}
\newcommand{\vv}{\bm{v}}
\newcommand{\vw}{\bm{w}}
\newcommand{\vx}{\bm{x}}
\newcommand{\vy}{\bm{y}}
```

```
\newcommand{\vz}{\bm{z}}


% % Random variables
% % old latex command \rm is overwritten, now should use `\textrm` or `\mathrm`
% \newcommand{\reta}{{\textnormal{$\eta$}}}
\newcommand{\ra}{{\textnormal{a}}}
\newcommand{\rb}{{\textnormal{b}}}
\newcommand{\rc}{{\textnormal{c}}}
\newcommand{\rd}{{\textnormal{d}}}
\newcommand{\re}{{\textnormal{e}}}
\newcommand{\rf}{{\textnormal{f}}}
\newcommand{\rg}{{\textnormal{g}}}
\newcommand{\rh}{{\textnormal{h}}}
\newcommand{\ri}{{\textnormal{i}}}
\newcommand{\rj}{{\textnormal{j}}}
\newcommand{\rk}{{\textnormal{k}}}
\newcommand{\rl}{{\textnormal{l}}}
\renewcommand{\rm}{{\textnormal{m}}}  % note \rm is old command
\newcommand{\rn}{{\textnormal{n}}}
\newcommand{\ro}{{\textnormal{o}}}
\newcommand{\rp}{{\textnormal{p}}}
\newcommand{\rq}{{\textnormal{q}}}
\newcommand{\rr}{{\textnormal{r}}}
\newcommand{\rs}{{\textnormal{s}}}
\newcommand{\rt}{{\textnormal{t}}}
\newcommand{\ru}{{\textnormal{u}}}
\newcommand{\rv}{{\textnormal{v}}}
\newcommand{\rw}{{\textnormal{w}}}
\newcommand{\rx}{{\textnormal{x}}}
\newcommand{\ry}{{\textnormal{y}}}
\newcommand{\rz}{{\textnormal{z}}}

% % Random vectors  % TODO, greek vector valued random variables and vectors are same
\newcommand{\rvepsilon}{\bm{\epsilon}}
\newcommand{\rvtheta}{\bm{\theta}}
\newcommand{\rva}{\mathbf{a}}
\newcommand{\rvb}{\mathbf{b}}
```

```
\newcommand{\rvc}{\mathbf{c}}
\newcommand{\rvd}{\mathbf{d}}
\newcommand{\rve}{\mathbf{e}}
\newcommand{\rvf}{\mathbf{f}}
\newcommand{\rvg}{\mathbf{g}}
\newcommand{\rvh}{\mathbf{h}}
\newcommand{\rvi}{\mathbf{i}}
\newcommand{\rvj}{\mathbf{j}}
\newcommand{\rvk}{\mathbf{k}}
\newcommand{\rvl}{\mathbf{l}}
\newcommand{\rvm}{\mathbf{m}}
\newcommand{\rvn}{\mathbf{n}}
\newcommand{\rvo}{\mathbf{o}}
\newcommand{\rvp}{\mathbf{p}}
\newcommand{\rvq}{\mathbf{q}}
\newcommand{\rvr}{\mathbf{r}}
\newcommand{\rvs}{\mathbf{s}}
\newcommand{\rvt}{\mathbf{t}}
\newcommand{\rvu}{\mathbf{u}}
\newcommand{\rvv}{\mathbf{v}}
\newcommand{\rvw}{\mathbf{w}}
\newcommand{\rvx}{\mathbf{x}}
\newcommand{\rvy}{\mathbf{y}}
\newcommand{\rvz}{\mathbf{z}}

% % Elements of random vectors
\newcommand{\erva}{{\textnormal{a}}}
\newcommand{\ervb}{{\textnormal{b}}}
\newcommand{\ervc}{{\textnormal{c}}}
\newcommand{\ervd}{{\textnormal{d}}}
\newcommand{\erve}{{\textnormal{e}}}
\newcommand{\ervf}{{\textnormal{f}}}
\newcommand{\ervg}{{\textnormal{g}}}
\newcommand{\ervh}{{\textnormal{h}}}
\newcommand{\ervi}{{\textnormal{i}}}
\newcommand{\ervj}{{\textnormal{j}}}
\newcommand{\ervk}{{\textnormal{k}}}
\newcommand{\ervl}{{\textnormal{l}}}
```

```
\newcommand{\ervm}{{\textnormal{m}}}
\newcommand{\ervn}{{\textnormal{n}}}
\newcommand{\ervo}{{\textnormal{o}}}
\newcommand{\ervp}{{\textnormal{p}}}
\newcommand{\ervq}{{\textnormal{q}}}
\newcommand{\ervr}{{\textnormal{r}}}
\newcommand{\ervs}{{\textnormal{s}}}
\newcommand{\ervt}{{\textnormal{t}}}
\newcommand{\ervu}{{\textnormal{u}}}
\newcommand{\ervv}{{\textnormal{v}}}
\newcommand{\ervw}{{\textnormal{w}}}
\newcommand{\ervx}{{\textnormal{x}}}
\newcommand{\ervy}{{\textnormal{y}}}
\newcommand{\ervz}{{\textnormal{z}}}

% % Random matrices
\newcommand{\rmA}{{\mathbf{A}}}
\newcommand{\rmB}{{\mathbf{B}}}
\newcommand{\rmC}{{\mathbf{C}}}
\newcommand{\rmD}{{\mathbf{D}}}
\newcommand{\rmE}{{\mathbf{E}}}
\newcommand{\rmF}{{\mathbf{F}}}
\newcommand{\rmG}{{\mathbf{G}}}
\newcommand{\rmH}{{\mathbf{H}}}
\newcommand{\rmI}{{\mathbf{I}}}
\newcommand{\rmJ}{{\mathbf{J}}}
\newcommand{\rmK}{{\mathbf{K}}}
\newcommand{\rmL}{{\mathbf{L}}}
\newcommand{\rmM}{{\mathbf{M}}}
\newcommand{\rmN}{{\mathbf{N}}}
\newcommand{\rmO}{{\mathbf{O}}}
\newcommand{\rmP}{{\mathbf{P}}}
\newcommand{\rmQ}{{\mathbf{Q}}}
\newcommand{\rmR}{{\mathbf{R}}}
\newcommand{\rmS}{{\mathbf{S}}}
\newcommand{\rmT}{{\mathbf{T}}}
\newcommand{\rmU}{{\mathbf{U}}}
\newcommand{\rmV}{{\mathbf{V}}}
```

```
\newcommand{\rmW}{{\mathbf{W}}}
\newcommand{\rmX}{{\mathbf{X}}}
\newcommand{\rmY}{{\mathbf{Y}}}
\newcommand{\rmZ}{{\mathbf{Z}}}

% % Elements of random matrices
\newcommand{\ermA}{{\textnormal{A}}}
\newcommand{\ermB}{{\textnormal{B}}}
\newcommand{\ermC}{{\textnormal{C}}}
\newcommand{\ermD}{{\textnormal{D}}}
\newcommand{\ermE}{{\textnormal{E}}}
\newcommand{\ermF}{{\textnormal{F}}}
\newcommand{\ermG}{{\textnormal{G}}}
\newcommand{\ermH}{{\textnormal{H}}}
\newcommand{\ermI}{{\textnormal{I}}}
\newcommand{\ermJ}{{\textnormal{J}}}
\newcommand{\ermK}{{\textnormal{K}}}
\newcommand{\ermL}{{\textnormal{L}}}
\newcommand{\ermM}{{\textnormal{M}}}
\newcommand{\ermN}{{\textnormal{N}}}
\newcommand{\ermO}{{\textnormal{O}}}
\newcommand{\ermP}{{\textnormal{P}}}
\newcommand{\ermQ}{{\textnormal{Q}}}
\newcommand{\ermR}{{\textnormal{R}}}
\newcommand{\ermS}{{\textnormal{S}}}
\newcommand{\ermT}{{\textnormal{T}}}
\newcommand{\ermU}{{\textnormal{U}}}
\newcommand{\ermV}{{\textnormal{V}}}
\newcommand{\ermW}{{\textnormal{W}}}
\newcommand{\ermX}{{\textnormal{X}}}
\newcommand{\ermY}{{\textnormal{Y}}}
\newcommand{\ermZ}{{\textnormal{Z}}}



% % Elements of vectors
\newcommand{\evalpha}{{\alpha}}
\newcommand{\evbeta}{{\beta}}
```

```
\newcommand{\evepsilon}{{\epsilon}}
\newcommand{\evlambda}{{\lambda}}
\newcommand{\evomega}{{\omega}}
\newcommand{\evmu}{{\mu}}
\newcommand{\evpsi}{{\psi}}
\newcommand{\evsigma}{{\sigma}}
\newcommand{\evtheta}{{\theta}}

\newcommand{\eva}{{a}}
\newcommand{\evb}{{b}}
\newcommand{\evc}{{c}}
\newcommand{\evd}{{d}}
\newcommand{\eve}{{e}}
\newcommand{\evf}{{f}}
\newcommand{\evg}{{g}}
\newcommand{\evh}{{h}}
\newcommand{\evi}{{i}}
\newcommand{\evj}{{j}}
\newcommand{\evk}{{k}}
\newcommand{\evl}{{l}}
\newcommand{\evm}{{m}}
\newcommand{\evn}{{n}}
\newcommand{\evo}{{o}}
\newcommand{\evp}{{p}}
\newcommand{\evq}{{q}}
\newcommand{\evr}{{r}}
\newcommand{\evs}{{s}}
\newcommand{\evt}{{t}}
\newcommand{\evu}{{u}}
\newcommand{\evv}{{v}}
\newcommand{\evw}{{w}}
\newcommand{\evx}{{x}}
\newcommand{\evy}{{y}}
\newcommand{\evz}{{z}}

% %% Matrix
\newcommand{\mBeta}{{\bm{\beta}}}
\newcommand{\mPhi}{{\bm{\Phi}}}
```

```
\newcommand{\mLambda}{{\bm{\Lambda}}}
\newcommand{\mSigma}{{\bm{\Sigma}}}

\newcommand{\mA}{{\bm{A}}}
\newcommand{\mB}{{\bm{B}}}
\newcommand{\mC}{{\bm{C}}}
\newcommand{\mD}{{\bm{D}}}
\newcommand{\mE}{{\bm{E}}}
\newcommand{\mF}{{\bm{F}}}
\newcommand{\mG}{{\bm{G}}}
\newcommand{\mH}{{\bm{H}}}
\newcommand{\mI}{{\bm{I}}}
\newcommand{\mJ}{{\bm{J}}}
\newcommand{\mK}{{\bm{K}}}
\newcommand{\mL}{{\bm{L}}}
\newcommand{\mM}{{\bm{M}}}
\newcommand{\mN}{{\bm{N}}}
\newcommand{\mO}{{\bm{O}}}
\newcommand{\mP}{{\bm{P}}}
\newcommand{\mQ}{{\bm{Q}}}
\newcommand{\mR}{{\bm{R}}}
\newcommand{\mS}{{\bm{S}}}
\newcommand{\mT}{{\bm{T}}}
\newcommand{\mU}{{\bm{U}}}
\newcommand{\mV}{{\bm{V}}}
\newcommand{\mW}{{\bm{W}}}
\newcommand{\mX}{{\bm{X}}}
\newcommand{\mY}{{\bm{Y}}}
\newcommand{\mZ}{{\bm{Z}}}


% \DeclareMathAlphabet{\mathsfit}{\encodingdefault}{\sfdefault}{m}{sl}
% \SetMathAlphabet{\mathsfit}{bold}{\encodingdefault}{\sfdefault}{bx}{n}
% \newcommand{\tens}[1]{\bm{\mathsfit{#1}}}
% in mathjax use mathsf insteadly
\newcommand{\tens}[1]{ \bm{\mathit{\mathsf{#1}}} }
% % Tensor
\newcommand{\tA}{{\tens{A}}}
```

```
\newcommand{\tB}{{\tens{B}}}
\newcommand{\tC}{{\tens{C}}}
\newcommand{\tD}{{\tens{D}}}
\newcommand{\tE}{{\tens{E}}}
\newcommand{\tF}{{\tens{F}}}
\newcommand{\tG}{{\tens{G}}}
\newcommand{\tH}{{\tens{H}}}
\newcommand{\tI}{{\tens{I}}}
\newcommand{\tJ}{{\tens{J}}}
\newcommand{\tK}{{\tens{K}}}
\newcommand{\tL}{{\tens{L}}}
\newcommand{\tM}{{\tens{M}}}
\newcommand{\tN}{{\tens{N}}}
\newcommand{\tO}{{\tens{O}}}
\newcommand{\tP}{{\tens{P}}}
\newcommand{\tQ}{{\tens{Q}}}
\newcommand{\tR}{{\tens{R}}}
\newcommand{\tS}{{\tens{S}}}
\newcommand{\tT}{{\tens{T}}}
\newcommand{\tU}{{\tens{U}}}
\newcommand{\tV}{{\tens{V}}}
\newcommand{\tW}{{\tens{W}}}
\newcommand{\tX}{{\tens{X}}}
\newcommand{\tY}{{\tens{Y}}}
\newcommand{\tZ}{{\tens{Z}}}


% % Graph
\newcommand{\gA}{{\mathcal{A}}}
\newcommand{\gB}{{\mathcal{B}}}
\newcommand{\gC}{{\mathcal{C}}}
\newcommand{\gD}{{\mathcal{D}}}
\newcommand{\gE}{{\mathcal{E}}}
\newcommand{\gF}{{\mathcal{F}}}
\newcommand{\gG}{{\mathcal{G}}}
\newcommand{\gH}{{\mathcal{H}}}
\newcommand{\gI}{{\mathcal{I}}}
\newcommand{\gJ}{{\mathcal{J}}}
```

```
\newcommand{\gK}{{\mathcal{K}}}
\newcommand{\gL}{{\mathcal{L}}}
\newcommand{\gM}{{\mathcal{M}}}
\newcommand{\gN}{{\mathcal{N}}}
\newcommand{\gO}{{\mathcal{O}}}
\newcommand{\gP}{{\mathcal{P}}}
\newcommand{\gQ}{{\mathcal{Q}}}
\newcommand{\gR}{{\mathcal{R}}}
\newcommand{\gS}{{\mathcal{S}}}
\newcommand{\gT}{{\mathcal{T}}}
\newcommand{\gU}{{\mathcal{U}}}
\newcommand{\gV}{{\mathcal{V}}}
\newcommand{\gW}{{\mathcal{W}}}
\newcommand{\gX}{{\mathcal{X}}}
\newcommand{\gY}{{\mathcal{Y}}}
\newcommand{\gZ}{{\mathcal{Z}}}

% % Sets
\newcommand{\sA}{{\mathbb{A}}}
\newcommand{\sB}{{\mathbb{B}}}
\newcommand{\sC}{{\mathbb{C}}}
\newcommand{\sD}{{\mathbb{D}}}
% % Don't use a set called E, because this would be the same as our symbol
% % for expectation.
\newcommand{\sF}{{\mathbb{F}}}
\newcommand{\sG}{{\mathbb{G}}}
\newcommand{\sH}{{\mathbb{H}}}
\newcommand{\sI}{{\mathbb{I}}}
\newcommand{\sJ}{{\mathbb{J}}}
\newcommand{\sK}{{\mathbb{K}}}
\newcommand{\sL}{{\mathbb{L}}}
\newcommand{\sM}{{\mathbb{M}}}
\newcommand{\sN}{{\mathbb{N}}}
\newcommand{\sO}{{\mathbb{O}}}
\newcommand{\sP}{{\mathbb{P}}}
\newcommand{\sQ}{{\mathbb{Q}}}
\newcommand{\sR}{{\mathbb{R}}}
\newcommand{\sS}{{\mathbb{S}}}
```

```
\newcommand{\sT}{{\mathbb{T}}}
\newcommand{\sU}{{\mathbb{U}}}
\newcommand{\sV}{{\mathbb{V}}}
\newcommand{\sW}{{\mathbb{W}}}
\newcommand{\sX}{{\mathbb{X}}}
\newcommand{\sY}{{\mathbb{Y}}}
\newcommand{\sZ}{{\mathbb{Z}}}

% % Entries of a matrix
\newcommand{\emSigma}{{\Sigma}}
\newcommand{\emLambda}{{\Lambda}}
\newcommand{\emA}{{A}}
\newcommand{\emB}{{B}}
\newcommand{\emC}{{C}}
\newcommand{\emD}{{D}}
\newcommand{\emE}{{E}}
\newcommand{\emF}{{F}}
\newcommand{\emG}{{G}}
\newcommand{\emH}{{H}}
\newcommand{\emI}{{I}}
\newcommand{\emJ}{{J}}
\newcommand{\emK}{{K}}
\newcommand{\emL}{{L}}
\newcommand{\emM}{{M}}
\newcommand{\emN}{{N}}
\newcommand{\emO}{{O}}
\newcommand{\emP}{{P}}
\newcommand{\emQ}{{Q}}
\newcommand{\emR}{{R}}
\newcommand{\emS}{{S}}
\newcommand{\emT}{{T}}
\newcommand{\emU}{{U}}
\newcommand{\emV}{{V}}
\newcommand{\emW}{{W}}
\newcommand{\emX}{{X}}
\newcommand{\emY}{{Y}}
\newcommand{\emZ}{{Z}}
```

```
% % entries of a tensor
% % Same font as tensor, without \bm wrapper
% \newcommand{\etens}[1]{\mathsfit{#1}}
\newcommand{\etens}[1]{  \mathit{\mathsf{#1}}  }
\newcommand{\etLambda}{{\etens{\Lambda}}}
\newcommand{\etA}{{\etens{A}}}
\newcommand{\etB}{{\etens{B}}}
\newcommand{\etC}{{\etens{C}}}
\newcommand{\etD}{{\etens{D}}}
\newcommand{\etE}{{\etens{E}}}
\newcommand{\etF}{{\etens{F}}}
\newcommand{\etG}{{\etens{G}}}
\newcommand{\etH}{{\etens{H}}}
\newcommand{\etI}{{\etens{I}}}
\newcommand{\etJ}{{\etens{J}}}
\newcommand{\etK}{{\etens{K}}}
\newcommand{\etL}{{\etens{L}}}
\newcommand{\etM}{{\etens{M}}}
\newcommand{\etN}{{\etens{N}}}
\newcommand{\etO}{{\etens{O}}}
\newcommand{\etP}{{\etens{P}}}
\newcommand{\etQ}{{\etens{Q}}}
\newcommand{\etR}{{\etens{R}}}
\newcommand{\etS}{{\etens{S}}}
\newcommand{\etT}{{\etens{T}}}
\newcommand{\etU}{{\etens{U}}}
\newcommand{\etV}{{\etens{V}}}
\newcommand{\etW}{{\etens{W}}}
\newcommand{\etX}{{\etens{X}}}
\newcommand{\etY}{{\etens{Y}}}
\newcommand{\etZ}{{\etens{Z}}}
```

The command in markdown are defined as follows in mathJax

Click to unfold latex macro definition

```
<script>
window.MathJax = {
  tex: {
    inlineMath: [['$', '$']],
    displayMath: [['$$', '$$']],
    macros: {
      // General commands
      bm: ["\\boldsymbol{#1}", 1],
      sign: "\\operatorname{sign}",
      Tr: "\\operatorname{Tr}",
      E: "\\mathbb{E}",
      KL: "D_{\\mathrm{KL}}",
      NormalDist: "\\mathcal{N}",
      diag: "\\mathrm{diag}",
      Var: "\\mathrm{Var}",
      Cov: "\\mathrm{Cov}",
      standarderror: "\\mathrm{SE}",
      diff: "\\mathrm{d}",
      tran: "^{\\top}",
      inv: "^{-1}",
      rect: "\\mathrm{rectifier}",
      softmax: "\\mathrm{softmax}",
      sigmoid: "\\sigma",
      softplus: "\\zeta",
      R: "\\mathbb{R}",
      emp: "\\tilde{p}",
      lr: "\\alpha",
      reg: "\\lambda",
      Ls: "\\mathcal{L}",

      // Added missing bold Greek matrices
      mBeta: "\\bm{\\beta}",
      mPhi: "\\bm{\\Phi}",
      mLambda: "\\bm{\\Lambda}",
      mSigma: "\\bm{\\Sigma}",
```

```
    // Random Greek vector
    rvepsilon: "\\bm{\\epsilon}",

    // Greek Vectors
    vzero: "\\bm{0}",
    vone: "\\bm{1}",
    vmu: "\\bm{\\mu}",
    vnu: "\\bm{\\nu}",
    vtheta: "\\bm{\\theta}",

    va: "\\bm{a}", vb: "\\bm{b}", vc: "\\bm{c}", vd: "\\bm{d}", ve: "\\bm{e}",
    vf: "\\bm{f}", vg: "\\bm{g}", vh: "\\bm{h}", vi: "\\bm{i}", vj: "\\bm{j}",
    vk: "\\bm{k}", vl: "\\bm{l}", vm: "\\bm{m}", vn: "\\bm{n}", vo: "\\bm{o}",
    vp: "\\bm{p}", vq: "\\bm{q}", vr: "\\bm{r}", vs: "\\bm{s}", vt: "\\bm{t}",
    vu: "\\bm{u}", vv: "\\bm{v}", vw: "\\bm{w}", vx: "\\bm{x}", vy: "\\bm{y}", vz: "\\bm{z}",

    // Random vectors
    rva: "\\mathbf{a}", rvb: "\\mathbf{b}", rvc: "\\mathbf{c}", rvd: "\\mathbf{d}", rve: "\\mathbf{e}",
    rvf: "\\mathbf{f}", rvg: "\\mathbf{g}", rvh: "\\mathbf{h}", rvi: "\\mathbf{i}", rvj: "\\mathbf{j}",
    rvk: "\\mathbf{k}", rvl: "\\mathbf{l}", rvm: "\\mathbf{m}", rvn: "\\mathbf{n}", rvo: "\\mathbf{o}",
    rvp: "\\mathbf{p}", rvq: "\\mathbf{q}", rvr: "\\mathbf{r}", rvs: "\\mathbf{s}", rvt: "\\mathbf{t}",
    rvu: "\\mathbf{u}", rvv: "\\mathbf{v}", rvw: "\\mathbf{w}", rvx: "\\mathbf{x}", rvy: "\\mathbf{y}", rvz:
"\\mathbf{z}",

    // Random variables (single letters)
    ra: "{\\textnormal{a}}", rb: "{\\textnormal{b}}", rc: "{\\textnormal{c}}", rd: "{\\textnormal{d}}", re:
"{\\textnormal{e}}",
    rf: "{\\textnormal{f}}", rg: "{\\textnormal{g}}", rh: "{\\textnormal{h}}", ri: "{\\textnormal{i}}", rj:
"{\\textnormal{j}}",
    rk: "{\\textnormal{k}}", rl: "{\\textnormal{l}}", rm: "{\\textnormal{m}}", rn: "{\\textnormal{n}}", ro:
"{\\textnormal{o}}",
    rp: "{\\textnormal{p}}", rq: "{\\textnormal{q}}", rr: "{\\textnormal{r}}", rs: "{\\textnormal{s}}", rt:
"{\\textnormal{t}}",
    ru: "{\\textnormal{u}}", rv: "{\\textnormal{v}}", rw: "{\\textnormal{w}}", rx: "{\\textnormal{x}}", ry:
"{\\textnormal{y}}", rz: "{\\textnormal{z}}",

    // Matrices (bold)
    mA: "\\bm{A}", mB: "\\bm{B}", mC: "\\bm{C}", mD: "\\bm{D}", mE: "\\bm{E}",
    mF: "\\bm{F}", mG: "\\bm{G}", mH: "\\bm{H}", mI: "\\bm{I}", mJ: "\\bm{J}",
```

```
    mK: "\\bm{K}", mL: "\\bm{L}", mM: "\\bm{M}", mN: "\\bm{N}", mO: "\\bm{O}",
    mP: "\\bm{P}", mQ: "\\bm{Q}", mR: "\\bm{R}", mS: "\\bm{S}", mT: "\\bm{T}",
    mU: "\\bm{U}", mV: "\\bm{V}", mW: "\\bm{W}", mX: "\\bm{X}", mY: "\\bm{Y}", mZ: "\\bm{Z}",

    // Random Matrices
    rmA: "\\mathbf{A}", rmB: "\\mathbf{B}", rmC: "\\mathbf{C}", rmD: "\\mathbf{D}", rmE: "\\mathbf{E}",
    rmF: "\\mathbf{F}", rmG: "\\mathbf{G}", rmH: "\\mathbf{H}", rmI: "\\mathbf{I}", rmJ: "\\mathbf{J}",
    rmK: "\\mathbf{K}", rmL: "\\mathbf{L}", rmM: "\\mathbf{M}", rmN: "\\mathbf{N}", rmO: "\\mathbf{O}",
    rmP: "\\mathbf{P}", rmQ: "\\mathbf{Q}", rmR: "\\mathbf{R}", rmS: "\\mathbf{S}", rmT: "\\mathbf{T}",
    rmU: "\\mathbf{U}", rmV: "\\mathbf{V}", rmW: "\\mathbf{W}", rmX: "\\mathbf{X}", rmY: "\\mathbf{Y}",
rmZ: "\\mathbf{Z}",

    // Elements of random matrices
    ermA: "{\\textnormal{A}}", ermB: "{\\textnormal{B}}", ermC: "{\\textnormal{C}}", ermD:
"{\\textnormal{D}}",
    ermE: "{\\textnormal{E}}", ermF: "{\\textnormal{F}}", ermG: "{\\textnormal{G}}", ermH:
"{\\textnormal{H}}",
    ermI: "{\\textnormal{I}}", ermJ: "{\\textnormal{J}}", ermK: "{\\textnormal{K}}", ermL:
"{\\textnormal{L}}",
    ermM: "{\\textnormal{M}}", ermN: "{\\textnormal{N}}", ermO: "{\\textnormal{O}}", ermP:
"{\\textnormal{P}}",
    ermQ: "{\\textnormal{Q}}", ermR: "{\\textnormal{R}}", ermS: "{\\textnormal{S}}", ermT:
"{\\textnormal{T}}",
    ermU: "{\\textnormal{U}}", ermV: "{\\textnormal{V}}", ermW: "{\\textnormal{W}}", ermX:
"{\\textnormal{X}}",
    ermY: "{\\textnormal{Y}}", ermZ: "{\\textnormal{Z}}",

    // Elements of vectors (Greek)
    evalpha: "\\alpha",
    evbeta: "\\beta",
    evepsilon: "\\epsilon",
    evlambda: "\\lambda",
    evomega: "\\omega",
    evmu: "\\mu",
    evpsi: "\\psi",
    evsigma: "\\sigma",
    evtheta: "\\theta",

    // Elements of vectors (Latin)
```

```
    eva: "a", evb: "b", evc: "c", evd: "d", eve: "e",
    evf: "f", evg: "g", evh: "h", evi: "i", evj: "j",
    evk: "k", evl: "l", evm: "m", evn: "n", evo: "o",
    evp: "p", evq: "q", evr: "r", evs: "s", evt: "t",
    evu: "u", evv: "v", evw: "w", evx: "x", evy: "y", evz: "z",

    // Matrix elements
    emSigma: "\\Sigma",
    emLambda: "\\Lambda",
    emA: "A", emB: "B", emC: "C", emD: "D", emE: "E",
    emF: "F", emG: "G", emH: "H", emI: "I", emJ: "J",
    emK: "K", emL: "L", emM: "M", emN: "N", emO: "O",
    emP: "P", emQ: "Q", emR: "R", emS: "S", emT: "T",
    emU: "U", emV: "V", emW: "W", emX: "X", emY: "Y", emZ: "Z",

    // Tensors
    tens: ["\\bm{\\mathsf{#1}}",1],
    tA: "\\tens{A}", tB: "\\tens{B}", tC: "\\tens{C}", tD: "\\tens{D}", tE: "\\tens{E}",
    tF: "\\tens{F}", tG: "\\tens{G}", tH: "\\tens{H}", tI: "\\tens{I}", tJ: "\\tens{J}",
    tK: "\\tens{K}", tL: "\\tens{L}", tM: "\\tens{M}", tN: "\\tens{N}", tO: "\\tens{O}",
    tP: "\\tens{P}", tQ: "\\tens{Q}", tR: "\\tens{R}", tS: "\\tens{S}", tT: "\\tens{T}",
    tU: "\\tens{U}", tV: "\\tens{V}", tW: "\\tens{W}", tX: "\\tens{X}", tY: "\\tens{Y}", tZ: "\\tens{Z}",

    // Graph (calligraphic)
    gA: "\\mathcal{A}", gB: "\\mathcal{B}", gC: "\\mathcal{C}", gD: "\\mathcal{D}", gE: "\\mathcal{E}",
    gF: "\\mathcal{F}", gG: "\\mathcal{G}", gH: "\\mathcal{H}", gI: "\\mathcal{I}", gJ: "\\mathcal{J}",
    gK: "\\mathcal{K}", gL: "\\mathcal{L}", gM: "\\mathcal{M}", gN: "\\mathcal{N}", gO: "\\mathcal{O}",
    gP: "\\mathcal{P}", gQ: "\\mathcal{Q}", gR: "\\mathcal{R}", gS: "\\mathcal{S}", gT: "\\mathcal{T}",
    gU: "\\mathcal{U}", gV: "\\mathcal{V}", gW: "\\mathcal{W}", gX: "\\mathcal{X}", gY: "\\mathcal{Y}",
gZ: "\\mathcal{Z}",

    // Sets
    sA: "\\mathbb{A}", sB: "\\mathbb{B}", sC: "\\mathbb{C}", sD: "\\mathbb{D}",
    sF: "\\mathbb{F}", sG: "\\mathbb{G}", sH: "\\mathbb{H}", sI: "\\mathbb{I}", sJ: "\\mathbb{J}",
    sK: "\\mathbb{K}", sL: "\\mathbb{L}", sM: "\\mathbb{M}", sN: "\\mathbb{N}", sO: "\\mathbb{O}",
    sP: "\\mathbb{P}", sQ: "\\mathbb{Q}", sR: "\\mathbb{R}", sS: "\\mathbb{S}", sT: "\\mathbb{T}",
    sU: "\\mathbb{U}", sV: "\\mathbb{V}", sW: "\\mathbb{W}", sX: "\\mathbb{X}", sY: "\\mathbb{Y}", sZ:
"\\mathbb{Z}"
  }
```

```
  }
};
</script>
<script id="MathJax-script" async src="https://cdn.jsdelivr.net/npm/mathjax@3/es5/tex-chtml-full.js"></script>
```

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