Exactly nine numbers compose the Cauchy stress
tensor $\boldsymbol{\sigma}$, which describes how matter can be
deformed at a single point in our
three dimensional space:

$$\boldsymbol{\sigma} = \begin{bmatrix} \sigma_{xx} & \sigma_{xy} & \sigma_{xz} \\ \sigma_{yx} & \sigma_{yy} & \sigma_{yz} \\ \sigma_{zx} & \sigma_{zy} & \sigma_{zz} \end{bmatrix}.$$

The gentle squeeze of
a toy or the tension in an iron beam,
can both be described by this abstract tool.
Mathematically, arbitrarily large stresses are allowed.
However, in practice, as materials crack and crumble, so does the
theory, becoming increasingly complex and unpredictable.

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