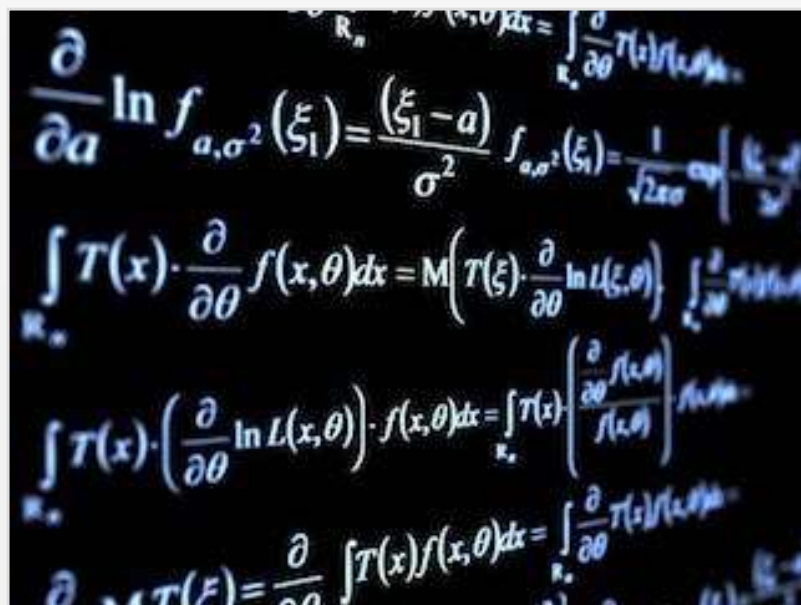


Ansible modules



- Ansible comes with hundreds of modules for tasks.
- Examples: copy, template, get_url, uri, reboot
- Modules are scripts in Python/ Powershell
- Modules do stuff, and deal with the corner cases.
- Modules return JSON data that you can use.

Idempotency


$$\begin{aligned} \frac{\partial}{\partial a} \ln f_{a, \sigma^2}(\xi_1) &= \frac{(\xi_1 - a)}{\sigma^2} f_{a, \sigma^2}(\xi_1) = \frac{1}{\sqrt{2\pi\sigma}} \exp\left(-\frac{(\xi_1 - a)^2}{2\sigma^2}\right) \\ \int_{\mathbb{R}_n} T(x) \cdot \frac{\partial}{\partial \theta} f(x, \theta) dx &= M\left(T(\xi) \cdot \frac{\partial}{\partial \theta} \ln L(\xi, \theta)\right) \int_{\mathbb{R}_n} \frac{\partial}{\partial \theta} f(x, \theta) dx \\ \int_{\mathbb{R}_n} T(x) \cdot \left(\frac{\partial}{\partial \theta} \ln L(x, \theta)\right) \cdot f(x, \theta) dx &= \int_{\mathbb{R}_n} T(x) \left(\frac{\partial}{\partial \theta} \frac{f(x, \theta)}{f(x, \theta)}\right) \cdot f(x, \theta) dx \\ \frac{\partial}{\partial \theta} \int_{\mathbb{R}_n} T(x) f(x, \theta) dx &= \int_{\mathbb{R}_n} \frac{\partial}{\partial \theta} T(x) f(x, \theta) dx \end{aligned}$$

Idempotence is the property of certain operations in mathematics and computer science, that can be applied multiple times without changing the result beyond the initial application