

A diagram illustrating Bayes' theorem. The equation is  $\pi(\theta|y) = \frac{\pi(y|\theta) \pi(\theta)}{\int \pi(y|\theta) \pi(\theta) d\theta}$ . Labels with arrows point to the components: 'posterior' points to  $\pi(\theta|y)$ ; 'likelihood' points to  $\pi(y|\theta)$ ; 'prior' points to  $\pi(\theta)$ ; and 'marginal likelihood' points to the denominator integral.

posterior

likelihood

prior

$$\pi(\theta|y) = \frac{\pi(y|\theta) \pi(\theta)}{\int \pi(y|\theta) \pi(\theta) d\theta}$$

marginal likelihood