Untitled

Section 2.0

All the numerators combined include the denominator in Bayes formula.

Playing around with LaTeX:

$$P(x_i \mid y) = \frac{1}{\sqrt{2\pi\sigma_y^2}}$$

Section 3.0

Everything has probability zero in a continuous distribution.

For a uniform distribution $\pi(\theta)$ is 1

$$\pi(0.5) = \int_0^{0.5} \pi(\theta)\,\mathrm{d}\theta = 0.5$$

More Fun with LaTeX

$$\cos(2\theta) = \cos^2\theta - \sin^2\theta$$

$\lim_{x\to\infty} \exp(-x) = 0$

$\sqrt{\frac{a}{b}}$

$\int_0^\infty \mathrm{e}^{-x}\,\mathrm{d}x$

$$A_{m,n} = \begin{pmatrix} a_{1,1} & a_{1,2} & \cdots & a_{1,n} \\ a_{2,1} & a_{2,2} & \cdots & a_{2,n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{m,1} & a_{m,2} & \cdots & a_{m,n} \end{pmatrix}$$