

$$\log \frac{p(\mathbf{e})}{p(\mathbf{e}|\mathbf{A})} = \log \frac{p(\mathbf{e})}{p(\mathbf{e}|\mathbf{A}, \mathbf{B})} + \log \frac{p(\mathbf{e}|\mathbf{A}, \mathbf{B})}{p(\mathbf{e}|\mathbf{A})}$$