Maximum a Posterior

Let $\mathbf{y} = (\mathbf{x}, \mathbf{z})$ be some random variable and $f(\mathbf{y})$ it's pdf and Θ the set of all possible parameters for the distribution of $\mathbf{y}$. Here, we ask the reversed question. This approach is applied for the posterior distribution. Then θ^* maximizes this posterior.

$$\theta^* = \arg\max_{\theta \in \Theta} f(\theta|\mathbf{y}) \tag{1}$$