

**function** PRIOR-SAMPLE( $bn$ ) **returns** an event sampled from the prior specified by  $bn$

**inputs:**  $bn$ , a Bayesian network specifying joint distribution  $\mathbf{P}(X_1, \dots, X_n)$

$\mathbf{x} \leftarrow$  an event with  $n$  elements

**for each** variable  $X_i$  **in**  $X_1, \dots, X_n$  **do**

$\mathbf{x}[i] \leftarrow$  a random sample from  $\mathbf{P}(X_i \mid \text{parents}(X_i))$

**return**  $\mathbf{x}$