

**function** ELIMINATION-ASK( $X, \mathbf{e}, bn$ ) **returns** a distribution over  $X$

**inputs:**  $X$ , the query variable  
 $\mathbf{e}$ , observed values for variables  $E$   
 $bn$ , a Bayesian network with variables  $vars$

*factors*  $\leftarrow []$

**for each**  $V$  **in** ORDER( $vars$ ) **do**

*factors*  $\leftarrow [\text{MAKE-FACTOR}(V, \mathbf{e})] + \text{factors}$

**if**  $V$  is a hidden variable **then** *factors*  $\leftarrow \text{SUM-OUT}(V, \text{factors})$

**return** NORMALIZE(POINTWISE-PRODUCT(*factors*))