function REJECTION-SAMPLING(*X*, **e**, *bn*, *N*) **returns** an estimate of $\mathbf{P}(X \,|\, \mathbf{e})$
  inputs: *X*, the query variable
           e, observed values for variables **E**
           bn, a Bayesian network
           N, the total number of samples to be generated
  local variables: **C**, a vector of counts for each value of *X*, initially zero

  for *j* = 1 **to** *N* **do**
    x ← PRIOR-SAMPLE(*bn*)
    if x is consistent with **e then**
      C[*j*] ← **C**[*j*]+1 where x_j is the value of *X* in **x**
  return NORMALIZE(**C**)