

CECS 451 Assignment 6

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Write answers the following questions:

a. $\vec{P}(\text{Visit to Asia} \mid \text{dyspnoea}) = \langle 0.01032, 0.98968 \rangle$

Query Results	×
Query Results for Variable visit to Asia? [dyspnoea?=T]	
P (visit to Asia? = T) = 0.01032	
P (visit to Asia? = F) = 0.98968	
OK	

b. $\vec{P}(\text{Tuberculosis} \mid \text{positive X-ray}, \neg \text{dyspnoea}) = \langle 0.05402, 0.94598 \rangle$

Query Results	×
Query Results for Variable tuberculosis? [dyspnoea?=F] [positive X-ray?=T]	
P (tuberculosis? = T) = 0.05402	
P (tuberculosis? = F) = 0.94598	
OK	

c. $P(\text{bronchitis} \mid \neg \text{lung cancer}) = 0.44286$

Query Results	×
Query Results for Variable bronchitis? [lung cancer?=F]	
P (bronchitis? = T) = 0.44286	
P (bronchitis? = F) = 0.55714	
OK	

d. $P(\neg \text{lung cancer} \mid \text{tuberculosis}, \neg \text{dyspnoea}) = 0.95143$

Query Results	×
Query Results for Variable lung cancer? [tuberculosis?=T] [dyspnoea?=F]	
P (lung cancer? = T) = 0.04857	
P (lung cancer? = F) = 0.95143	
OK	

e. $\vec{P}(\text{Smoking} \mid \neg \text{positive X-ray}, \text{bronchitis}, \neg \text{visit to asia}) = \langle 0.64541, 0.35459 \rangle$

Query Results	×
Query Results for Variable smoking? [visit to Asia?=F] [bronchitis?=T] [dyspnoea?=F] [positive X-ray?=F]	
P (smoking? = T) = 0.64541	
P (smoking? = F) = 0.35459	
OK	