Exercise 2

$P(F=T, C=F, W=F)$

Use Chain Rule:

$P(W=F) \times P(I=T|W=F) \times P(C=F|W=F) \times P(F=T|C=F, I=T) +$
$P(W=F) \times P(I=F|W=F) \times P(C=F|W=F) \times P(F=T|C=F, I=F)$

$= 0.5 \times 0.5 \times 0.8 \times 0.9 + 0.5 \times 0.5 \times 0.8 \times 0 = 0.1800$

0.1800 or 18.00% probability when Fever is true and Cold/Winter are false with Influenza unknown