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I. A

the prior:

the probability I am in Pittsburgh is $P(in\ Pittsburgh) = 0.9$, I am at my parents' home is $P(at\ parents'\ home) = 0.08$, I am on vacation is $P(on\ vacation) = 0.02$

II. B

$P(ocean) = P(ocean|in\ \ Pittsburgh)P(in\ \ Pittsburgh) + P(ocean|at\ \ parents'\ \ home)P(at\ \ parents'\ \ home) + P(ocean|on\ vacation)P(on\ vacation) = 0.02 \times 0.1 = 0.002$

the likelihood:

$P(ocean|in\ Pittsburgh) = 0$, $P(ocean|at\ parents'\ home) = 0$, $P(ocean|on\ vacation) = 0.1$

the posterior:

$P(in\ Pittsburgh|ocean) = \frac{P(ocean|in\ Pittsburgh)P(in\ Pittsburgh)}{P(ocean)} = 0$

$P(at\ parents'\ home|ocean) = \frac{P(ocean|at\ parents'\ home)P(at\ parents'\ home)}{P(ocean)} = 0$

$P(on\ vacation\ home|ocean) = \frac{P(ocean|on\ vacation)P(on\ vacation)}{P(ocean)} = 1$