Congratulations! You passed!

TO PASS 75% or higher

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GRADE
100%

Practice quiz on Problem Solving

TOTAL POINTS 9

1. I am given the following 3 joint probabilities: **1 / 1 point**

p(I am leaving work early, there is a football game that I want to watch this afternoon) = $.1$

p(I am leaving work early, there is not a football game that I want to watch this afternoon) = $.05$

p(I am not leaving work early, there is not a football game that I want to watch this afternoon) = $.65$

What is the probability that there is a football game that I want to watch this afternoon?

- .2
- .35
- .1
- .3

Correct

Getting the answer is a two-step process. First, recall that the sum of probabilities for a probability distribution must sum to 1. So the "missing" joint distribution

p(I am not leaving work early, there is a football game I want to watch this afternoon) must be $1–(0.1 + 0.05 + 0.65) = 0.2$

By the sum rule, the marginal probability p(there is a football game that I want to watch this afternoon) = the sum of the joint probabilities

P(I am leaving work early, there is a football game that I want to watch this afternoon) + P(I am not leaving work early, there is a football game I want to watch this afternoon) = $.1 + .2 = .3$