PBIO 294 In Class Evaluation 13 Sep 2017

Chapter: K4, L 1.5, 1.6, 1.9

Name:

1. p(x, y) = p(x)p(y) implies that x and y are independent. TRUE or FALSE. (Circle one). 2 points.

2. Are eye and hair color independent in the following data? Explain. 6 points.

Proportions of combinations of hair color and eye color in sample.

Hair color

Eye color Black Brunette Red Blond Marginal (eye color)

Brown 0.11 0.20 0.04 0.01 0.37

Blue 0.03 0.14 0.03 0.16 0.36

Hazel 0.03 0.09 0.02 0.02 0.16

Green 0.01 0.05 0.02 0.03 0.11

Marginal 0.18 0.48 0.12 0.21 1.0

3. A probability distribution is simply a list of all possible outcomes and their corresponding probabilities. TRUE or FALSE. (Circle one) 2 points.

4. What is the difference between a probability density function and probability mass function? Explain. 5 points.