Practice Quiz 5

Statistics 90-707 Fall 2021 Dr. Nancy Pfenning

1. (3 pts.) A large group of drivers participated in an online survey about their driving habits. This table shows the probability of the respondents driving various types of cars.

Type	Economy	Family	Luxury	Sports	Truck	Utility	Van
Probability	.33	.22	.06	.14	.11	.10	.04

   (a) What is the probability of not driving an economy car?

   (b) What is the probability of a respondent driving a truck, utility vehicle, or van?

   (c) If two respondents are chosen at random, what is the probability that both drive utility vehicles?

2. (7 pts.) This table classifies 2000 Americans with respect to age group and having health insurance or not.

	College-Aged	Other	Total
Insured	140	1560	1700
Uninsured	60	240	300
Total	200	1800	2000

   (a) Find the count of Americans who are college-aged or uninsured.

   (b) Find the probability of being college-aged or uninsured.

   (c) Find the count of Americans who are college-aged and uninsured.

   (d) Find the probability of being college-aged and uninsured.

   (e) The explanatory variable is _____ and this table displays it along the (i) rows (ii) columns

   (f) What is the conditional probability of being uninsured, given that someone is college-aged?

   (g) What is the conditional probability of being uninsured, given that someone is non-college-aged?

   (h) Does there appear to be a substantial relationship between being college-aged or not and having health insurance or not? Explain.

   (i) Notice that altogether, 300 of those 2000 were uninsured. If equal proportions were uninsured, then _____ of the 200 college-aged individuals would be uninsured, and _____ of the 1800 others would be uninsured.