1. The table below is a probability model for the number of cars in a randomly-selected household in the United States. (Based on U.S. Census 2000 data).

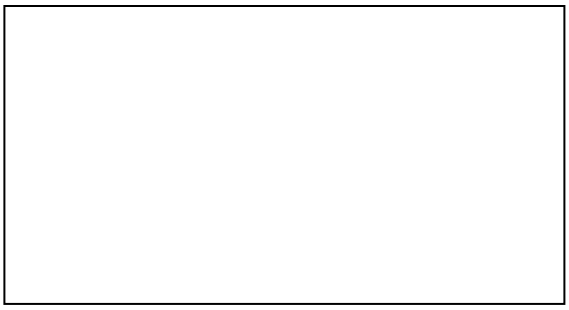
Number of cars	0	1	2	3	4	5 or more
Probability	0.07	0.19	0.47	?	0.06	0.02

(a) What is the probability that a randomly selected household has three cars? (That is, fill in the space marked with a "?") Show your work.

(b) What is the probability that a randomly-selected household has at least 2 cars? Show your work.

2. Last Saturday at Pasquale's Pizzas and Wings, 60 customers were served over the course of the evening. Fifty-two customers ordered pizza and 16 ordered buffalo wings. Twelve of these customers ordered both pizza and wings. Suppose we select a customer from last Saturday at random.

(a) Fill in the Venn diagram below so that it describes the chance process involved here. Let P = the event "ordered pizza" and W = the event "ordered wings."



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(b) What is the probability that a randomly-chosen customer did not order wings or pizza? Justify you answer with appropriate calculations.

3. The table below gives the counts (in thousands) of earned degrees in the United States in a recent year, classified by level and by the gender of the degree recipient.

	Degree				
	Bachelor's	Master's	Professional	Doctoral	Total
Female	616	194	30	16	856
Male	529	171	44	26	770
Total	1145	365	74	42	1626

Suppose one degree recipient from this group is selected randomly.

(a) List two mutually exclusive events for this chance process.

(b) What is the probability that the person selected earned a Master's degree?

(c) What is the probability that the person selected earned a Professional or Doctoral degree?

(d) What is the probability that the person selected is female or earned a Master's degree?