Conditional Probability Homework — Geometry

1. What is P(cats | male)?

2. What is P(own dog I male)?

	Male	Female
Own Cat	20	32
Own Dog	42	28

3. What is the probability that a female will be selected given that she owns a dog?

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4. What is the probability that a freshman respondent will be chosen given that they like math?

5. What is P(science I sophomore)?

6. What is P(sophomore I science)?

	Like Math	Like Science
Freshman	120	601
Sophomore	203	799
Junior	402	210
Senior	425	390

7. What is the probability that that a math respondent will be a senior?

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8. A random survey was taken to gather information about grade level and car ownership status of students at a school. This table shows the results of the survey.

Car Ownership by Grade

	Owns a Car	Does Not Own a Car	Total
Junior	6	10	16
Senior	12	8	20
Total	18	18	36

Estimate the probability that a randomly selected student will be a junior, given that the student owns a car.

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9. Find P(ace I red card).

10. Find P(face card I spades).

11. Find P(black card I 3 or 4).

12. Find P(not getting a face card I heart)

13. If two dice are rolled, find P(sum of 5 I 3).

14. If two dice are rolled, find P(sum that is even I you rolled a 4).

A faculty advisor at Ridge High School surveyed 100 students about their preference for a social event. Of the 100 students surveyed, 50 were tenth graders and 50 were eleventh graders. Of the tenth graders, 30 chose a bowling party and 20 chose a dance. Of the eleventh graders, 20 chose a bowling party and 30 chose a dance.

15. Make a two way frequency table to represent the data.

Let T = 10th graders, E = 11th graders, B = Bowling, and D = Dance

16. Find P(B).

17. Find P(B | T).

The table below shows data about 108 pizzas sold in a pizzeria. Each pizza was sold with one topping.

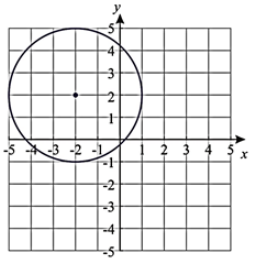
Pizza shape	Pizza topping			
	Pepperoni	Mushroom	Onion	Chicken
Round	20	10	15	15
Square	16	8	18	6

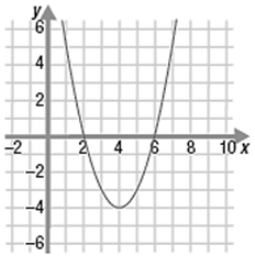
18. What is P(round pizza I mushrooms or onions)?

19. What is P(chicken pizza I square)?

20. What is P(not getting pepperoni I round)?

Use the figure to the right to answer each question.





21. What is the probability that the graph has a solutic of (1, 2) given at least one variable is squared in the equation representing the graph)?

22. What is the probability that the graph is a function given that x is squared in the equation representing the graph)?