Geometry (HSS-CP.A.4) Name: _____
Unit Six: Probability – Frequency Tables (HW5) Date: _____ Period: _____

1. The boys and girls of a class had been surveyed about whether they had received a speeding ticket or not. The two way table shows the results of the survey.

a) What is the probability of getting a speeding ticket? _____

b) What is the probability of being a girl with a speeding ticket? _____

c) What is the probability of being a boy with no speeding ticket? _____

	Speeding Ticket	No Speeding Ticket	Total
Boy	9	31	40
Girl	1	25	26
Total	10	56	66

d) Who is more likely to getting a speeding ticket, boys or girls? Boys or Girls Explain your choice.

e) Are boys and speeding tickets independent or not? Yes or No
Use mathematics to explain your choice.

2. 12 boys and 18 girls were surveyed about whether they like pizza or hamburgers better. 18 students picked pizza and 10 girls chose hamburgers. Complete the two way table and then determine the probabilities.

a) What is the probability that a hamburger is the favorite? _____

b) What is the probability that you pick a boy that likes pizza? _____

c) What is the probability that you pick a girl? _____

	_____	_____	Total
_____			
_____			
Total			

d) Given that a hamburger was selected, who is more likely to select it, a boy or a girl? _____

e) Given that a girl was selected, what is the probability of selecting pizza? _____

3. The following relative frequency table was created from the data gathered from a survey about favorite colors.

a) What is the P(Red)? _____

b) What is the P(Female)? _____

c) What is the P(Female and Blue)? _____

d) What is the P(Red or Green)? _____

e) What is the P(Male and Not Green)? _____

f) What is the P(Blue or Female)? _____

	Red	Green	Blue	Yellow	Total
Male	.24	.14	.18	0	.56
Female	.16	.16	.06	.06	.44
Total	.40	.30	.24	.06	1

4. High Schools were surveyed about whether they owned a Playstation or a Wii. Of the 100 surveyed 70 owned Wii, 23 didn't own a Playstation, and 9 didn't own either system.

_____	_____	Total
_____		
_____		
Total		

a) What is the P(Playstation)? _____

b) What is the P(No Wii)? _____

c) What is the P(Playstation and Wii)? _____

d) What is the P(Wii and No Playstation)? _____

e) What is the P(Playstation or Wii)? _____

f) What is the P(Neither System)? _____

g) Are owning a Playstation and owning a Wii independent of each other? Yes or No
Use mathematics to explain your choice.

h) Why do you think that the two are not independent of each other? Why would one possibly influence the other?

5. The town of Centerville is divided by a railroad track that splits the population of the town into two groups, the North side and South side of town. Centerville is having an election for the mayor; Tim Jenson is running against Joe Smith. If the side of town that you live on is independent of the candidate that you will choose, how many people do we expect on the North Side to vote for Joe Smith?

	Jenson	Smith	Total
North		??	60
South			40
Total	50	50	100