Name: _____ Per: _____ Date: _____
Serafino ▪ Precalculus S2

8C Probability

Skills Check / Quiz Review

	Got Sick	Didn't Get Sick	Totals
Ate burritos	8	5	13
Didn't eat burritos	6	33	39
Totals	14	38	52

1. A company had 52 people at a conference and served burritos. Then, a bunch of people got sick. We're trying to figure out if it was the burritos. If you picked someone at random from the conference… (*Please use the unsimplified ratios)*

a. Odds(Someone who got sick)

b. P(Someone who got sick OR ate a burrito)

c. P(Someone who ate a burrito and got sick)

d. P(Someone who ate a burrito | Got sick)

e. P(Someone who got sick | Ate a burrito)

f. P(Someone got sick | Didn't eat a burrito)

g. You decide. Are the burritos to blame? Make an argument one way or another.

2. Given the word: B U R R I T O

(a–c) If **one** letter is selected at random…

a. P (R)

b. P(R|R) =

c. P (R|Consonant)

(d–e) If **two** letters are selected, without replacement:

d. P(R and R) =

e. P(R |R)

* Bonus: P(R|Consonant)

3. A jar contains 14 marbles. 6 of the marbles are blue, 5 are yellow, and 3 are red. You pick 2 marbles from the jar without replacement.

a. Find P(B ∩ R)

b. Find P(R|B)

c. Find P(Y, then B)

d. Find P(R, then R)

4. In a certain part of the world, in any someone's lifetime the probability of a plague is 39%, the probability of a famine is 52%, and the probability of both a plague and a famine is 15%.

Are Plague and Famine independent or dependent events? Prove it.

When someone is born, what is the probability, they will experience…

a. Plague and no famine

b. Famine and no plague

c. Neither plague nor famine

d. Only ONE catastrophe (not both)

e. Plague, given a famine will occur

f. Famine, given a plague will occur

g. Famine, given no plague will occur

5. The probability it will rain Saturday is 20%. The probability it will rain Sunday is 30%. The probability it will rain on Sunday, given that it will rain on Saturday is 50%. What is the probability it will…

a. Rain both days?

b. Rain during the weekend?

c. Rain Sunday |No rain Saturday?