

Jessica surveys students at her school about their favorite food. She recorded the responses in the table below.

	PIZZA	CHICKEN	STEAK	FRENCH FRIES	TOTALS
MALES	14	10	6	7	
FEMALES	12	13	4	8	
TOTALS					

1. What is the conditional relative frequency of female students who prefer Pizza?
2. What is the joint frequency of male students who prefer Steak?
3. What is the marginal frequency for each type of food?
4. What is the marginal frequency for each gender?
5. Given that the student is female, what is the conditional frequency that she likes french fries?

Billy surveys 9th graders and 10th graders which Ice Cream Flavor they preferred. The results are in the table below.

	VANILLA	CHOCOLATE	STRAWBERRY	MINT CHOCOLATE	TOTALS
9 <sup>th</sup> Graders	7	12	5	15	
10 <sup>th</sup> Graders	5	11	8	13	
TOTALS					

1. What is the conditional relative frequency of 9th graders who prefer Chocolate?
2. What is the joint frequency of 10th graders who prefer Mint Chocolate?
3. What is the marginal frequency of each Ice Cream Flavor?
4. What is the marginal frequency of each grade?
5. Given the student is a 9th grader, what is the conditional frequency he/she likes Strawberry?

A large group of people was surveyed about their favorite movie genre. From Action, Drama, Comedy, I & Horror.

	ACTION	DRAMA	COMEDY	HORROR	TOTALS
MALES	15	3	10	8	
FEMALES	5	10	10	9	
TOTALS					

1. What is the conditional relative frequency of female moviegoers who prefer Drama?
2. What is the joint frequency of male students who prefer Action?
3. What is the marginal frequency for each genre of movie?
4. What is the marginal frequency for each gender?
5. Given that the student is female, what is the conditional frequency that she likes Comedy Films?

**Answer Key**

	PIZZA	CHICKEN	STEAK	FRENCH FRIES	TOTALS
MALES	14	10	6	7	37
FEMALES	12	13	4	8	37
TOTALS	26	23	10	15	74

- $12/37$
- $6/74$
- Pizza.  $23/74 = 13/37$   
Chicken.  $23/74 = 13/37$   
Steak.  $10/74 = 5/37$   
French Fries  $15/74$
- Male  $37/74 = \frac{1}{2}$   
Female  $37/74 = \frac{1}{2}$
- $8/37$

	VANILLA	CHOCOLATE	STRAWBERRY	MINT CHOCOLATE	TOTALS
9 <sup>th</sup> Graders	7	12	5	15	39
10 <sup>th</sup> Graders	5	11	8	13	37
TOTALS	12	23	13	28	76

- $12/39 = 4/13$
- $13/76$
- Vanilla.  $12/76 = 3/19$   
Chocolate  $23/36$   
Strawberry  $13/76$   
Mint Chocolate  $28/76 = 7/19$
- 9<sup>th</sup> grader  $39/76$   
10<sup>th</sup> grader  $37/76$
- $5/39$

	ACTION	DRAMA	COMEDY	HORROR	TOTALS
MALES	15	3	10	8	36
FEMALES	5	10	10	9	34
TOTALS	20	13	20	17	70

- $3/36 = 1/12$
- $15/70 = \frac{3}{14}$
- Action  $20/70 = 2/7$   
Drama  $13/70$   
Comedy  $20/70 = 2/7$   
Horror  $17/70$
- Male.  $36/70 = 18/35$   
Female.  $34/70 = 17/35$
- $10/34 = 5/17$