

Outcome: Apply principles of probability to calculate or verify the chances of an event. [CONCLUDE]

1. The two way frequency table below is similar in format to what we have worked with so far in this unit. Use this table to answer the questions below:

		Attendance		Total
		Attending	Not Attending	
Class	Junior	42	64	106
	Senior	77	37	114
Total		119	101	220

Annotations:

- 106 juniors responded.
- 114 seniors responded.
- 220 students were surveyed.
- 119 students are attending.
- 101 students are not attending.

- (a) What is the probability that a Junior was surveyed?
- (b) What is the probability that the student surveyed was a Junior and is attending the event?
- (c) What is the probability that the student surveyed was a Junior or is attending the event?

2. Our two-way frequency tables can look a little different, observe the table below. What makes this tables different from above?

		Attendance		Total
		Attending	Not Attending	
Class	Junior	$\frac{42}{220} \approx 0.191$	$\frac{64}{220} \approx 0.291$	0.482
	Senior	$\frac{77}{220} = 0.35$	$\frac{37}{220} \approx 0.168$	0.518
Total		0.541	0.459	1

Annotations:

- About 29.1% of the students in the survey are juniors and are *not* attending the concert.
- About 51.8% of the students in the survey are seniors.

Sometimes our two way tables can be expressed with decimals or percentages. We still follow the same steps, where they add up across columns & rows and the total is in the bottom right corner of the table.

3. A satellite TV provider surveys customers in three cities. The survey asks whether they could recommend the TV provider to a friend. The results, given as joint relative frequencies, are shown in the two-way table.

		Location		
		Glendale	Santa Monica	Long Beach
Response	Yes	0.29	0.27	0.32
	No	0.05	0.03	0.04

(a) What is the probability that a randomly selected customer will recommend the provider?

(b) What is the probability that a randomly selected customer will not recommend the provider and is located in Long Beach?

4. Sketch the following tables into your notes and fill in the missing cells:

(a)

		Preparation		Total
		Studied	Did Not Study	
Grade	Pass		6	
	Fail			10
Total		38		50

(b)

		Response		Total
		Yes	No	
Role	Student	56		
	Teacher		7	10
Total			49	

[WHEN YOU ARE FINISHED, YOU CAN CHECK YOUR ANSWERS ON THE WEBSITE. LASTLY, COMPLETE THE GOOGLE FORM SHARED ON OUR GOOGLE CLASSROOM