

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

TASK: Complete the following task in your notes. If you have any questions, please see Katherine during the 11 am office hours on google hangout.

- 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.

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

- 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.

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

- What is the probability that a randomly selected customer will recommend the provider?
- 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:

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

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