Statistical Reasoning
Two Way Frequency Table Practice

Name:

Felipe surveyed students at his school. He found that 78 students own a cell phone, and 57 of those students own an MP3 player. There are 13 students that do not own a cell phone, but own an MP3 player. Nine students do not own either device. Construct a two-way table summarizing the data. Then answer the following questions.

	Cell phone	no cell phone	total
mp3 player	57	13	70
no mp3 player	21	9	30
total	78	22	100

1) How many students own a cell phone?

78 students

2) What is the probability that a student owns a cell phone and a MP3 player?

$\frac{57 \text{ own both}}{100 \text{ total}} = 0.57$

3) What is the probability that a student owns a cell phone or a MP3 player?

$\frac{78 \text{ cell phone} + 70 \text{ mp3} - 57 \text{ both (counted twice)}}{100} = \frac{91}{100} = 0.91$

4) What is the probability that a student does not own a MP3 player?

$\frac{30}{100} = 0.3 \text{ or } 0.30$

Create a two way frequency table to represent the following:

As each person entered the theater, Aaron counted how many of the 105 people had popcorn, and how many had a drink. He found that out of 84 people that had popcorn, only 10 did not have a drink. Six people walked in without popcorn or a drink.

	drink	no drink	total
popcorn	74	10	84
no popcorn	15	6	21
total	89	16	105