Questions on 9.2?

(24) $\frac{\text{part}}{\text{whole}} = \frac{\text{is}}{\text{of}} = \frac{\%}{100}$

$\frac{32}{160} = 0.2 = 20\%$

$\frac{32}{160} = \frac{x}{100}$

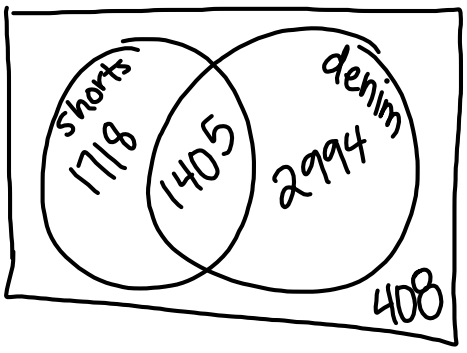
$\frac{3200}{160} = \frac{160x}{160}$

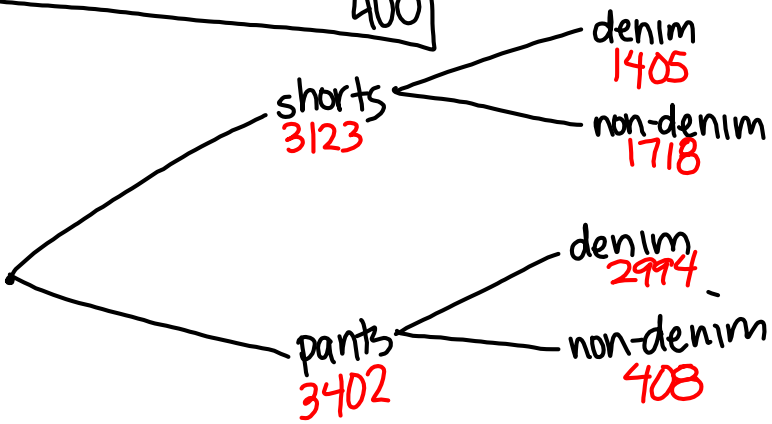
$20 = x$

(14) shorts or pants
denim or non-denim

	denim	non-denim	total
shorts	0.45(3123)= 1405	3123-1405= 1718	3123
pants	0.88(3402)= 2994	3402-2994= 408	6525-3123 = 3402
total	4399	2126	6525

3123
-1405
1718





Mar 28-10:02 AM

9.3 Fried Freddy's

A Solidify Understanding Task

Danielle was surprised by the results of the survey to determine the 'favorite ice cream' between chocolate and vanilla (See task 9.2 *Chocolate vs. Vanilla*). The reason, she explains, is that she had asked several of her friends and the results were as follows:

	Chocolate	Vanilla	Total
Female	23	10	33
Male	6	8	14
Total	29	18	47

1. In this situation, chocolate is most preferred. How would you explain to her that this data may be less 'valid' compared to the data from the previous survey?

more females than males, friends think similarly, 47 is not enough people.

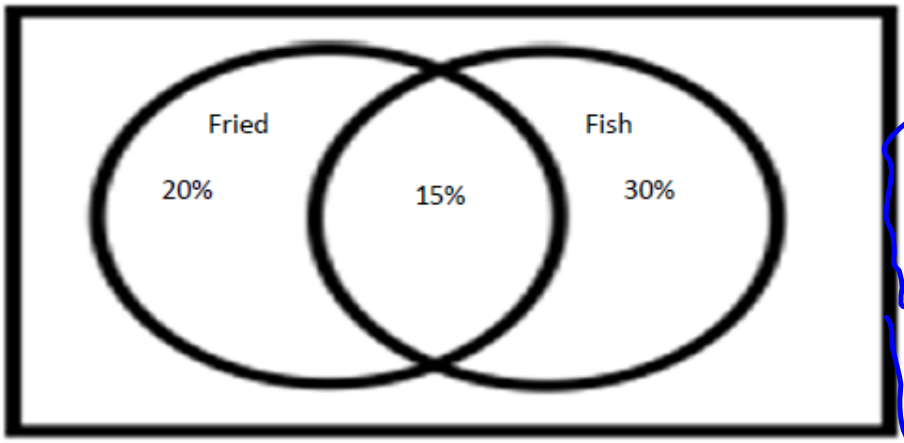
Using a sufficiently large number of trials helps us estimate the probability of an event happening. If the sample is large enough, we can say that we have an estimated probability outcome for the probability of an event happening. If the sample is not randomly selected (only asking your friends) or not large enough (collecting four data points is not enough information to estimate long run probabilities), then one should not estimate large scale probabilities. Sometimes, our sample increases in size over time. Below is an example of data that is collected over time, so the estimated probability outcome becomes more precise as the sample increases over time.

Freddy loves fried food. His passion for the perfect fried food recipes led to him opening the restaurant, "Fried Freddies." His two main dishes are focused around fish or chicken. Knowing he also had to open up his menu to people who prefer to have their food grilled instead of fried, he created the following menu board:

After being open for six months, Freddy realized he was having more food waste than he should because he was not predicting how much of each he should prepare in advance. His business friend, Tyrell, said he could help.

2. What information do you think Tyrell would need? (for all 6 months)
what is being eaten more, what food is being wasted, what food is ordered every day

Luckily, Freddy uses a computer to take orders each day so Tyrell had lots of data to pull from. After determining the average number of customers Freddy serves each day, Tyrell created the following Venn diagram to show Freddy the food preference of his customers:

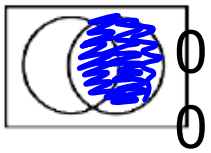


∩ "and" intersection

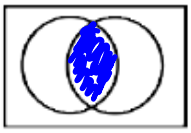
∪ "or" union

To make sense of the diagram, Freddy computed the following probability statements:

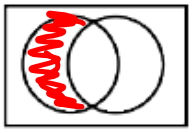
3. What is the probability that a randomly selected customer would order fish?
P(fish) = 15% + 30% = 45%
Shade the part of the diagram that models this solution.



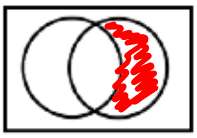
4. What is the probability that a randomly selected customer would order fried fish?
P(fried ∩ fish) = P(fried and fish) = 15%
Shade the part of the diagram that models this solution.



5. What is the probability that a person prefers fried chicken?
P(fried∩chicken) = P(fried and chicken) = 20%
Shade the part of the diagram that models this solution.

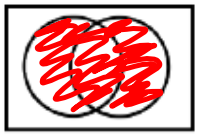


6. What is the estimated probability that a randomly selected customer would want their fish grilled?
P(grilled and fish) = P(grilled ∩ fish) = 30%.
Shade the part of the diagram that models this solution.

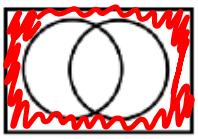


7. If Freddy serves 100 meals at lunch on a particular day, how many orders of fish should he prepare with his famous fried recipe? 15

8. What is the probability that a randomly selected person would choose fish or fried?
P(fried∪fish) = P(fried or fish) = 65%.
Shade the part of the diagram that models this solution.



9. What is the probability that a randomly selected person would NOT choose fish or fried? 35%.
Shade the part of the diagram that models this solution.



Homework

Finish 9.3 "Ready, Set, Go"

Mar 28-9:36 AM