* Skip circled problems for now

Statistics 3.2 & 3.3 Classwork Name: _____

A group of college students was asked if they carry credit cards. The results are shown in the table below. Use the table to find each probability.

Class	Credit card carrier	Not a credit card carrier	Total
Freshman	46	14	60
Sophomore	32	8	40
Total	78	22	100

Remember, express probabilities like this:
1. original fraction
2. reduce if poss.
3. hundredths place, or 2 sig figs when needed (.0036)

1. That a student chosen at random carries a credit card.

2. That a student chosen at random is a sophomore.

3. That a student is a sophomore and does not carry a credit card.

4. That a student carries a credit card or is a freshman.

5. That a student carries a credit card given that they are a freshman.

6. That a student is a sophomore given that they do not carry a credit card.

7. That a student is a freshman and carries a credit card.

8. That a student does not carry a credit card or is a sophomore.

9. Are the events 'carrying a credit card' and 'being a freshman' independent or dependent? Show your work with the appropriate fractions.

10. Are the events 'being a sophomore' and 'carrying a credit card' mutually exclusive? Explain.

Statistics 3.2 & 3.3 Probability practice Name: _____

The table below shows the gender and number of students that failed one class or more (by grade level) at a particular high school. Use the table to answer each question.

	9^{th}	10^{th}	11^{th}	12^{th}	Total
Female	632	390	185	62	1269
Male	608	402	153	43	1206
Total	1240	792	338	105	2475

1. Find the probability that a student who failed at least one class was a female.

2. Find the probability that a student who failed at least one class was a 10^{th} grader.

3. Find the probability that a student who failed at least one class was male, given that they are a 12^{th} grader.

4. Find the probability that a student who failed at least one class was a 12^{th} grader, given that they are male.

5. Find the probability that a student who failed at least one class is a female and an 11^{th} grader.

6. Find the probability that a student who failed at least one class is a 9^{th} grader or male.

7. Find the probability that a student who failed at least one class is a 10^{th} grader or 11^{th} grader.

8. Look back at #6 and #7. Which problem features 2 events that are mutually exclusive? Why?

9. Look back at #6 and #7. Which problem features 2 events that are not mutually exclusive? Why?

10. Are "being female" and "being in 9^{th} grade" independent or dependent? Show your work.