

Table Number: \_\_\_\_\_

Group Name: \_\_\_\_\_

Group Members: \_\_\_\_\_

## Using “AND” or “OR” to Combine Events

1. Kent State conducted a survey of 277 sophomore, junior, and senior undergraduate students regarding satisfaction with their living quarters. Results of the survey are shown in the table by class rank.

	<b>Sophomore</b>	<b>Junior</b>	<b>Senior</b>	<b>Total</b>
<b>Satisfied</b>	46	67	62	175
<b>Neutral</b>	14	17	10	41
<b>Not satisfied</b>	20	15	26	61
<b>Total</b>	80	99	98	277

A survey participant is selected at random. What is the probability that she is...

- a) A sophomore? In other words, what is  $P(\text{sophomore})$ ?
- b) Neutral? In other words, what is  $P(\text{neutral})$ ?
- c) A sophomore AND neutral? In other words, what is  $P(\text{soph AND neutral})$  ?
- d) A junior AND not satisfied? In other words, what is  $P(\text{junior AND not satisfied})$  ?
- e) A junior OR not satisfied ? In other words, find  $P(\text{junior OR not satisfied})$ .
- f)  $P(\text{senior or neutral})$ ?
- g)  $P(\text{senior or not satisfied})$ ?

2. The following data represent the number of drivers involved in fatal crashes in the United States in 2009 by day of the week and gender.

	<b>Male</b>	<b>Female</b>	<b>Total</b>
Sunday	8,222	4,325	<b>12,547</b>
Monday	6,046	3,108	<b>9,154</b>
Tuesday	5,716	3,076	<b>8,792</b>
Wednesday	5,782	3,011	<b>8,793</b>
Thursday	6,315	3,302	<b>9,617</b>
Friday	7,932	4,113	<b>12,045</b>
Saturday	9,558	4,824	<b>14,382</b>
<b>Total</b>	<b>49,571</b>	<b>25,759</b>	<b>75,330</b>

- a) Determine the probability that a randomly selected fatal crash involved a male.
  
- b) Determine the probability that a randomly selected fatal crash occurred on a Sunday.
  
- c) Determine the probability that a randomly selected fatal crash occurred on a Sunday and involved a male.
  
- d) Determine the probability that a randomly selected fatal crash occurred on Sunday or involved a male.
  
- e) Would it be unusual for a fatality to occur on Wednesday and involve a female driver?