

Math 221: Basic Statistics Quiz #4A

Week #5

Name: _____

SHOW ALL YOUR WORK FOR FULL CREDIT!

The following table shows the results of a survey in which families were asked if they own a computer and if they will be taking a summer vacation this year.

		Summer Vacation This Year		
		Yes	No	Total
Own a Computer	Yes	64	20	
	No	42	31	
	Total			

Find the probabilities that a randomly selected family from this survey

(1) owns a computer,

(2) is taking a vacation this year,

(3) is taking a vacation this year **and** owns a computer,

(4) is taking a vacation this year **or** owns a computer.

Math 221: Basic Statistics Quiz #4B

Week #5

Name: _____

SHOW ALL YOUR WORK FOR FULL CREDIT!

The following table shows the results of a survey in which families were asked if they own a computer and if they will be taking a summer vacation this year.

		Summer Vacation This Year		
		Yes	No	Total
Own a Computer	Yes	85	31	
	No	47	38	
	Total			

Find the probabilities that a randomly selected family from this survey

(1) owns a computer,

(2) is taking a vacation this year,

(3) is taking a vacation this year **and** owns a computer,

(4) is taking a vacation this year **or** owns a computer.

Math 221: Basic Statistics Quiz #4C

Week #5

Name: _____

SHOW ALL YOUR WORK FOR FULL CREDIT!

The following table shows the results of a survey in which families were asked if they own a computer and if they will be taking a summer vacation this year.

		Summer Vacation This Year		
		Yes	No	Total
Own a Computer	Yes	102	42	
	No	59	51	
	Total			

Find the probabilities that a randomly selected family from this survey

(1) owns a computer,

(2) is taking a vacation this year,

(3) is taking a vacation this year **and** owns a computer,

(4) is taking a vacation this year **or** owns a computer.

Math 221: Basic Statistics Quiz #4 Solutions

Week #7

If you finish the table, you find the following

		Vacation		
		Yes	No	Tot.
Owens	Yes	64	20	84
A	No	42	31	73
	Tot.	106	51	157

		Vacation		
		Yes	No	Tot.
Owens	Yes	85	31	116
A	No	47	38	85
	Tot.	132	69	201

		Vacation		
		Yes	No	Tot.
Owens	Yes	102	42	144
A	No	59	51	110
	Tot.	161	193	254

This makes the probabilities

$$P(\text{Computer}) = \frac{84}{157}$$

$$\approx 0.535$$

$$P(\text{Vacation}) = \frac{106}{157}$$

$$\approx 0.675$$

$$P(\text{V and C}) = \frac{64}{157}$$

$$\approx 0.408$$

$$P(\text{V or C}) = \frac{84 + 106 - 64}{157}$$

$$= \frac{126}{157} \approx 0.803$$

$$P(\text{Computer}) = \frac{116}{201}$$

$$\approx 0.577$$

$$P(\text{Vacation}) = \frac{132}{201}$$

$$\approx 0.657$$

$$P(\text{V and C}) = \frac{85}{201}$$

$$\approx 0.423$$

$$P(\text{V or C}) = \frac{116 + 132 - 85}{201}$$

$$= \frac{163}{201} \approx 0.811$$

$$P(\text{Computer}) = \frac{144}{254}$$

$$\approx 0.567$$

$$P(\text{Vacation}) = \frac{161}{254}$$

$$\approx 0.634$$

$$P(\text{V and C}) = \frac{102}{254}$$

$$\approx 0.402$$

$$P(\text{V or C}) = \frac{144 + 161 - 102}{254}$$

$$= \frac{203}{254} \approx 0.799$$