

9.2 Conditional Probability

Name: _____ Class: _____

The two-way table below gives information about how students travel to school in the morning.

	Bus	Different Method	Total
Juniors	28	27	55
Seniors	15	35	50
Total	43	62	105

Use the table to find the following probabilities. Give probabilities as reduced fractions and percents.

1) $P(\text{Bus})$

2) $P(\text{Junior})$

3) $P(\text{Senior})$

4) $P(\text{Senior} \cap \text{Different Method})$

5) $P(\text{Junior} \cap \text{Bus})$

6) $P(\text{Senior} \cup \text{Different Method})$

7) $P(\text{Junior} \cup \text{Bus})$

8) $P(\text{Senior} \mid \text{Bus})$

9) $P(\text{Bus} \mid \text{Junior})$

A survey of 115 students was done to see how many boys and girls carry gum with them. Fill in the missing information.

	Boys	Girls	Total
Gum			83
No Gum	14		
Total		61	

Use the table to find the following probabilities. Give probabilities as reduced fractions and percents.

10) $P(\text{Gum})$

11) $P(\text{No gum})$

12) $P(\text{Boy} \cup \text{Gum})$

13) $P(\text{Girl} \cup \text{Gum})$

14) $P(\text{Girl} \cap \text{No gum})$

15) $P(\text{Boy} \cap \text{Gum})$

16) $P(\text{Gum} \mid \text{Girl})$

17) $P(\text{Boy} \mid \text{Gum})$

18) $P(\text{No gum} \mid \text{Boy})$

Make your own survey. For this section, take a poll of 25 of your friends to find out what their favorite subject is. Then fill out the table and find each probability.

	Math (M)	English (E)	Science (S)	Social Studies (SS)	Total
Boys (B)					
Girls (G)					
Total					25

19) $P(B)$

20) $P(E)$

21) $P(SS)$

22) $P(B \cup M)$

23) $P(G|S)$

24) $P(G \cap SS)$

25) $P(B \cap E)$

26) $P(S|E)$

27) $P(B|M)$