Name: _____ **Unit 9:** Probability & Statistics

Date: _____ Per: _____ **Homework 11:** Two-Way Tables

**** This is a 2-page document! ****

**1.** A group of students who took the same math test were surveyed and asked if they studied for at least one hour and if they passed the test. Complete the table, then answer the questions that follow.

| | Studied < 1 Hour | Studied ≥ 1 Hour | Total |
|---|---|---|---|
| Passed | | 50 | 64 |
| Did Not Pass | 9 | | |
| Total | | 52 | 75 |

**a)** How many students studied for less than one hour?

**b)** How many students studied for at least one hour but did not pass?

**c)** How many students studied for less than one hour and passed?

**2.** Complete the relative frequency table using the data from question 1. Round to the nearest hundredth if necessary. Then answer the questions that follow.

| | Studied < 1 Hour | Studied ≥ 1 Hour | Total |
|---|---|---|---|
| Passed | | | |
| Did Not Pass | | | |
| Total | | | |

**a)** What percent of the students studied for at least one hour?

**b)** What percent of the students did not pass?

**c)** What percent of the students studied for less than one hour and did not pass?

**3.** A random group of high school students were surveyed and asked if they plan to attend the homecoming football game. Complete the table, then answer the questions that follow.

| | Going | Not Going | Total |
|---|---|---|---|
| Freshman | 9 | | |
| Sophomore | | 15 | 27 |
| Junior | 25 | 10 | |
| Senior | 28 | | 42 |
| Total | | 51 | |

**a)** How many seniors are not going to the game?

**b)** How many sophomores are going to the game?

**c)** How many students were surveyed?

**4.** Complete the relative frequency table using the data from question 3. Round to the nearest hundredth if necessary. Then answer the questions that follow.

| | Going | Not Going | Total |
|---|---|---|---|
| Freshman | | | |
| Sophomore | | | |
| Junior | | | |
| Senior | | | |
| Total | | | |

**a)** What percent of the students are sophomores?

**b)** What percent of the students are freshman and not going to the game?

**c)** What percent of the students are going to the game?

**5.** A group of 100 random students were surveyed and asked which season their birthday is in. Of the 58 girls surveyed, 8 have a birthday in the winter and 18 have a birthday in the fall. Of the boys surveyed, 5 have a birthday in the spring and 12 have a birthday in the summer. Of all the students surveyed, 34 have birthdays in the fall and 21 have birthdays in the summer. Complete the table, then answer the equations that follow.

| | Girl | Boy | Total |
|---|---|---|---|
| Winter | | | |
| Spring | | | |
| Summer | | | |
| Fall | | | |
| Total | | | |

**a)** How many students have a birthday in the winter?

**b)** How many boys have a birthday in the fall?

**c)** How many girls have a birthday in the summer?

**6.** Complete the relative frequency table using the data from question 5. Round to the nearest hundredth if necessary. Then answer the questions that follow.

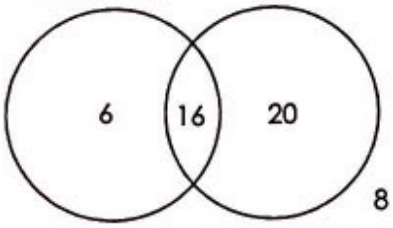
| | Girl | Boy | Total |
|---|---|---|---|
| Winter | | | |
| Spring | | | |
| Summer | | | |
| Fall | | | |
| Total | | | |

**a)** What percent of the students are boys?

**b)** What percent of the students have a birthday in the spring?

**c)** What percent of the students are boys and have a birthday in the winter?

**7.** A group of random 8th graders were surveyed and asked if they have a Facebook profile and if they have a SnapChat profile. Results are shown in the Venn diagram below.




**a)** Complete the two-way table using the data in the Venn diagram.

| | Facebook | No Facebook | Total |
|---|---|---|---|
| SnapChat | | | |
| No SnapChat | | | |
| Total | | | |

**b)** How many of the students surveyed have SnapChat?

**c)** How many of the students surveyed do not have Facebook?

**8.** Complete the relative frequency table using the data from question 7. Round to the nearest hundredth if necessary. Then answer the questions that follow.

| | Facebook | No Facebook | Total |
|---|---|---|---|
| SnapChat | | | |
| No SnapChat | | | |
| Total | | | |

**a)** If there are 380 total eighth graders, approximately how many have Facebook?

**b)** If there are 380 total eighth graders, approximately how many do not have Facebook or SnapChat?