Algebra 1 – Unit 4A Assessment Practice Name _____ Date _____ Period ___

Part A: Interpreting Categorical Data [S-ID.B.5]

Answer the questions completely.

Alexander is conducting a survey and recorded ice-cream flavor preference and the gender of each student. Alexander's empty two-way frequency table is below.

	Preferred Ice-Cream Flavor			
	Chocolate	Vanilla	Other	
Male				
Female				

1. **Complete** the two-way frequency table using the following data. Alexander surveyed 92 males and found that 33 of them preferred chocolate, 15 preferred vanilla, and the remainder preferred other. Alexander surveyed 107 females, of which 16 preferred chocolate, 49 preferred vanilla, and the remainder preferred other.

2. A) **Find** the percentage of the students that are girls who like chocolate.

   B) **Find** the percent of students that like vanilla.

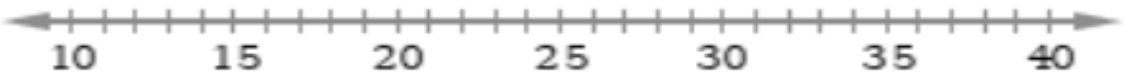
   C) Given a student is Female, **find** the probability that they prefer other.

   D) Given a student likes chocolate, **find** the probability that they male.

3. A) Alex would like to know if gender influences ice-cream preference. **Determine** if it would be more appropriate to create a row-conditional relative frequency table or a column-conditional relative frequency table to help answer the question. **Create** the more appropriate table.

   B) **State** the ice-cream flavor that Females are more likely to prefer. **Justify** your answer using your findings.

Part B: Comparing One Variable Statistics [S-ID.A.2]

	Answer the questions completely.
	You are comparing the ACT scores of students in two rival Academic Decathlon Teams. Team Alpha (ACT scores): 20, 20, 20, 22, 24, 26, 26, 28, 32, 33 Team Epsilon (ACT scores): 15, 18, 20, 27, 28, 30, 30, 32, 33, 34
4.	**Construct** a dot plot for Team Alpha.
5.	**Construct** a histogram for Team Epsilon.
6.	**Construct** a box plot for each club below for the purpose of comparison. Team Alpha:  Team Epsilon:
7.	**State** and **compare** the measures of center for the teams. Make sure to include both measures of center.
8.	**State** and **compare** the measures of spread for the teams. Make sure to include all three measures.

Part C: Skewness [S-ID.A.2]

	For each data set below, **determine** if the data is *skew right, skew left, or approximately symmetric*.		
9.