RANDOM SAMPLING - WORD PROBLEMS

1. A famous singer wants to know which of his three new songs do people like the most. The data from a random sample taken after one of his concerts is shown below. What percent of the sample likes *Thinking About You*?

Song	Thinking About You	Maybe Just Twice	Listen To My Heart
Likes	60	43	47

   40% of the people like *Thinking About You*.

2. Happy-Go Restaurant wants to know how customers feel about their service. In a random sample, 49 out of 70 customers said the restaurant was welcoming, inviting, and they enjoyed their meal.

A. If the next week they serve 630 customers, about how many of them will enjoy the service?

   441 customers

B. What percent of the customers probably will not return or recommend Happy-Go Restaurant?

   189 customers

3. The new principal at Beazer High School wants to know how many of the 1,288 students are happy at his school. In a random sample sent home to the parents, 75 out of 300 said their children are happy at the school. Based on the sample results, how many students in the entire school are happy?

   322 students are happy.

4. Mr. Jones is planning on buying some new sporting equipment for the 245 students in his after school sports program. He wants to know which sports the students in the program enjoy the most so he can order the correct equipment. The results of his random sample are shown below.

Sport	Baseball	Basketball	Football	Hockey	Soccer	Tennis	Total
Votes	6	14	9	4	5	2	40

A. Based on the sample results, approximately how many of the 245 students prefer basketball?

   86 students

B. What inferences can he make from the sample data?

   Not many students like tennis. Half of them like basketball and football combined. Less than half like baseball, hockey, soccer, and tennis. Other answers exist.

5. In a random sample, 33 out of 60 students said they prefer chocolate ice cream. How many servings should the school cafeteria prepare for 1,200 students?

   660 servings of chocolate ice cream.