

37. When Matt's and Damien's broad jumps were measured **accurately to the nearest foot**, each measurement was 21 feet. Which statement best describes the greatest possible difference in the lengths of Matt's jump and Damien's jump?
- A. One jump could be up to  $\frac{1}{4}$  foot longer than the other.
  - B. One jump could be up to  $\frac{1}{2}$  foot longer than the other.
  - C. One jump could be up to 1 foot longer than the other.
  - D. One jump could be up to 2 feet longer than the other.

*Reporting Category/Substrand for Item 37: **Geometry and Measurement/Measurement (p. 144)***

## Session 3, Open-Response Questions

38. The planning committee at Lane Middle School is planning a pizza party for its 127 eighth-grade students. They got this menu from The Pizza Palace.

The planning committee took a survey of a random sample of 26 eighth-grade students by asking, “What kind of pizza do you want?” This is what they found.

<b>The Pizza Palace</b>		
FREE DELIVERY		
PIZZA IS OUR SPECIALTY		
	Medium (Serves 4)	Large (Serves 6)
Cheese.....	\$9.00	... \$11.00
Sausage.....	\$9.75	... \$12.00
Pepperoni.....	\$9.75	... \$12.00
Vegetarian.....	\$9.50	... \$11.75

Favorite Kind of Pizza				
Kind of pizza	Cheese	Sausage	Pepperoni	Vegetarian
Number of students	7	3	9	7

The committee has a budget of \$300 for the pizza. What kinds and sizes of pizzas could the committee order so that each of the 127 students can have his or her favorite kind of pizza?

- a. Explain how you used the results of the survey to decide which pizzas to order.
- b. Show or describe the calculations needed to be sure that there will be enough pizza for the 127 students.
- c. Show or describe the calculations needed to be sure that the cost of the pizzas totals \$300 or less.

You do **not** need to find the cheapest way to buy enough pizza. You only need to make sure that the total cost is \$300 or less.

*Reporting Category/Substrand for Item 38: **Number Sense/Computation and Estimation (p. 142)***

## Mathematics, Grade 8

39. For Tiffany and Miguel's science fair project, they dropped the same ball from a height of 200 centimeters 20 times. Each time they dropped the ball, they measured how high it bounced on its first four bounces. The table below gives the average of their measurements.

Average Height of Ball Bounces (drop height = 200 cm)	
Height of 1st bounce	153 cm
Height of 2nd bounce	110 cm
Height of 3rd bounce	86 cm
Height of 4th bounce	63 cm

- Using the grid in your answer booklet, draw a graph showing the data in the table. Be sure to label the axes.
- Predict the height of the 5th bounce.
- Describe the pattern that can be used to predict the height of the bounces.

*Reporting Category/Substrand for Item 39: **Statistics and Probability/Statistics (p. 145)***