Name _____ Date _____

Start Your Day the Right Way

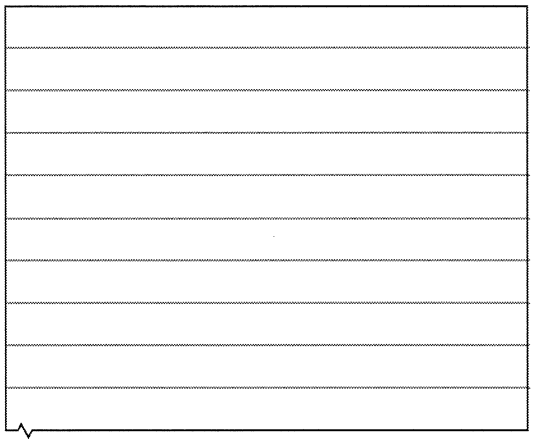
Graphically Representing Data

1. Mr. Follweiller finished grading the quizzes for one of his Algebra 1 classes. The table shown is the recorded grades of the class.

Student	Grade	Student	Grade
A	85	N	53
B	89	O	71
C	66	P	90
D	74	Q	65
E	77	R	55
F	72	S	98
G	64	T	53
H	55	U	62
I	61	V	55
J	52	W	64
K	81	X	62
L	61	Y	56
M	71	Z	87

a. Mr. Follweiller is worried that his students may not have understood the material covered on the quiz. He would like to get a better idea of how the class did as a whole. Would you recommend that he make a dot plot, a box-and-whisker plot, or a histogram to display this data? Explain your reasoning.

b. Construct a dot plot and histogram of the data in the table.



c. Describe the distributions of the graphs. What do you notice?

d. What information does the dot plot provide that the histogram does not?

e. The students argue that more than half the students failed the quiz, so they think Mr. Follweiller should let them retake it. A grade of 56 is failing.

Construct a box-and-whisker plot of the data.

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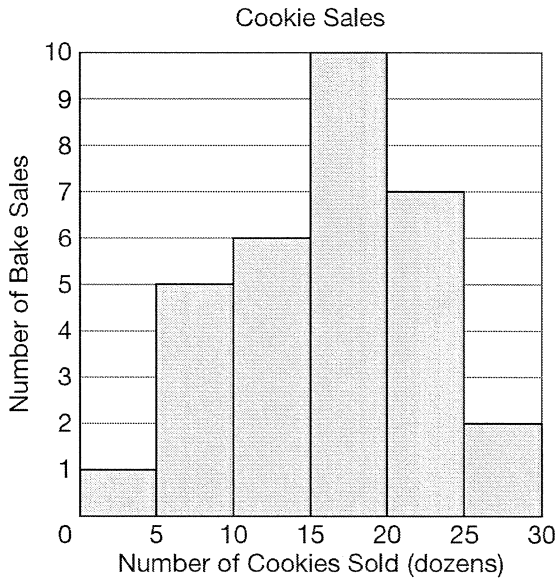
f. Describe the distribution of the box-and-whisker plot. Explain what it means in terms of this problem situation.

g. Are the students correct? Explain your reasoning.

2. The student government is gearing up for their next semi-annual bake sale. The graph shown displays the cookie sales at the last 31 bake sales.



a. At how many bake sales did the student government sell 18 dozen cookies? Explain how you determined your answer.

b. At how many bake sales did the student government sell at least 20 dozen, but less than 25 dozen cookies? Explain how you determined your answer.

c. Describe the distribution of the graph. Explain what this means in terms of the problem situation.

d. How many dozen cookies would you recommend the student government bake for the upcoming bake sale? Explain your reasoning.