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Homework Problem Set Sample Solutions

1. **A. Describe the distribution of the data in the histogram below.**

Grades on the English Test

Grade on the Quiz
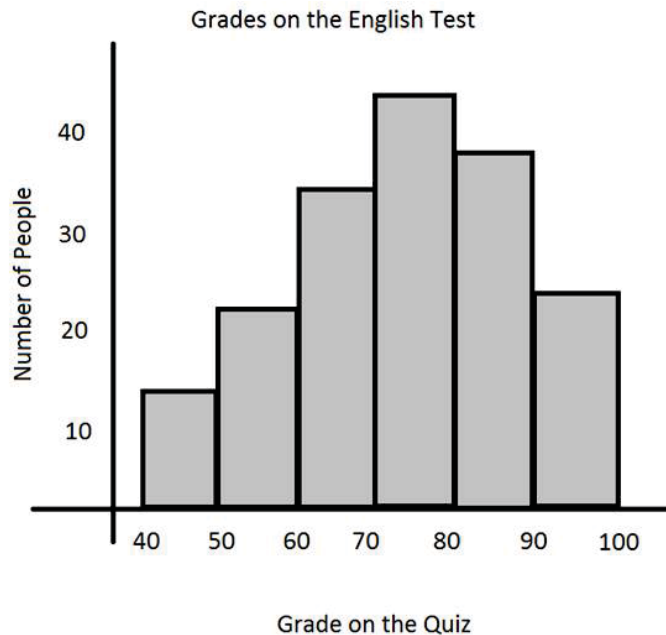
The data is fairly symmetrical but is slightly left skewed. There do not appear to be any gaps or outliers. The center is around 70.

B. **What specific information can you get from this graph?**

Answers will vary. About 100 students got a 70 or better on the English test. About 70 students got a grade lower than a 70. About 13 students got between a 40 and 50 on the test and about 22 students got between a 50 and 60 on the test.

C. **What could have be done to make this histogram easier to read?**

Answers will vary. If the vertical axis was split into smaller intervals and there were horizontal lines, you could more easily read the amounts in each group. Splitting the horizontal axis into smaller intervals would have helped too.

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Unit 5:   Measuring Distributions

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2. **Use the data on candy bars data to create two histograms - one on the number of calories and one on the grams of protein.   Then describe the data in each distribution.**

Candy Name	Number of Grams	Calories	Proteins in Grams
3 Musketeers	51	212	1.5
Almond Joy	50	232	2.5
Butterfinger	45	216	5.5
Kit Kat	43	220.5	3
M&M's – Peanut	47	242.5	4.5
Nestle Crunch	44	229.5	2.5
Reese's Pieces	55	258	7
Skittles	57	231	0
Snickers	57	273	4.5
Starburst	59	233.5	0
Twix – Caramel	57	284.5	2.5
York Peppermint Pattie	43	149	1.5

[source: http://www.cnn.com/FOOD/resources/food.for.thought/sweets/compare.candy.bar.html

Number of Calories in One Serving with 12 Selected Candy Bars	Number of Grams of Protein in One Serving with 12 Selected Candy Bars
Number of Calories in 12 Selected Candy Bars	Grams of Protein in 12 Selected Candy Bars
Description	Description
Answers may vary. This histogram is showing a gap between 160 and 200 calories. It looks like there might be an outlier in the 140 – 160 range of calories. The center is around 230 calories.	Answers may vary. This histogram is showing a small gap between 6 and 7 grams of protein. There doesn't appear to be an outlier. The center is around 3.5 grams.

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