

UNDERSTANDING AND DRAWING HISTOGRAMS

HISTOGRAMS

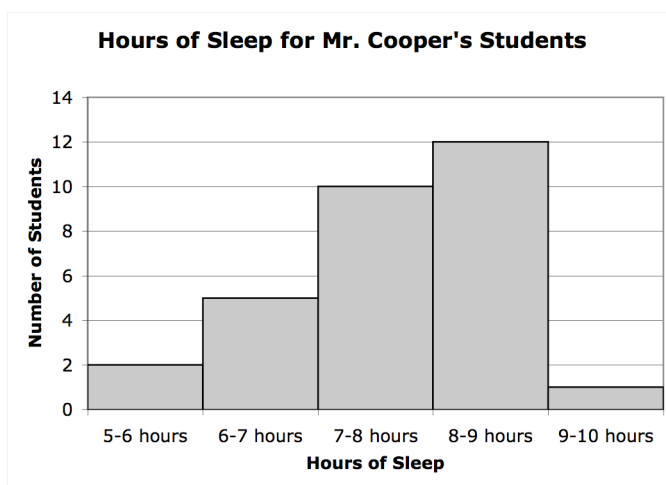
A histogram is a graph constructed from a frequency table. The intervals are shown on the horizontal axis and the number of scores are represented by the height of a rectangle located above the interval.

Example 1

Mr. Cooper surveyed his students about the amount of sleep they got every night and here are the results:

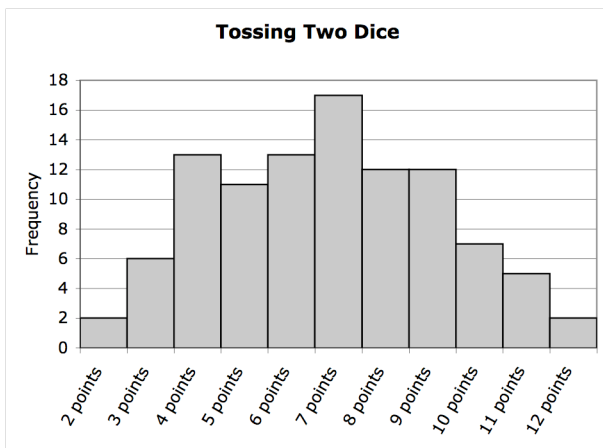
5–6 hours	2 students
6–7 hours	5 students
7–8 hours	10 students
8–9 hours	12 students
9–10 hours	1 student

This data is shown in the histogram at right.



Example 2

Two dice were tossed 100 times. The total points of each toss are represented in the histogram below:



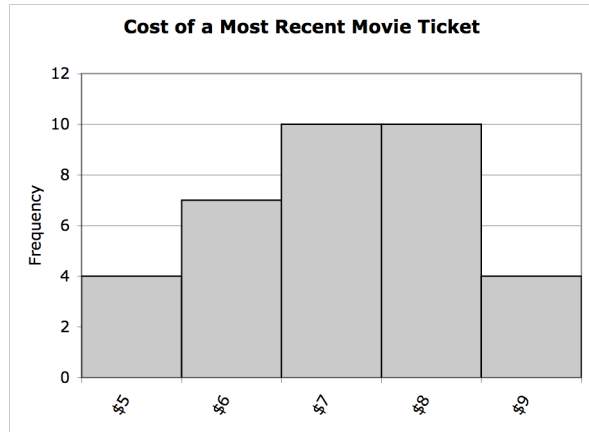
Use the histogram at left to answer each question.

- Which outcome happened the most times? [7 points]
- How many times did this outcome happen? [17]
- How many rolls had a total of less than 6 points? [32]
- How many rolls had a total of 10 or more points? [14]

Problems

For problems 1–3, use the histogram at right.

1. What price was most often paid for movie tickets?
2. How many people bought tickets for less than \$7?
3. From this survey, what was the total amount spent on movie tickets?



For problems 4–7, draw a histogram for the data.

4. Three coins were flipped 20 times and the number of "heads" showing was recorded below:

Number of Heads	0	1	2	3
Frequency	3	7	8	2

5. The results for the most recent math test in Ms. Dietiker's class are shown below:

90–100%	8 students
80–89%	10 students
70–79%	7 students
60–69%	4 students
40–49%	2 students

6. Ms. Petersen asked her students how long is required to travel from home to school. The information is shown below:

Minutes to School	0–15	16–30	31–45	46–60	61–75	76–90
Frequency	12	10	5	8	0	1

7. Mr. Fernandez asked 30 people at work how many pets they owned. The results are shown below:

0 pets	5 people
1 pet	8 people
2 pets	10 people
3 pets	3 people
4 pets	2 people
5 pets	1 person
15 pets	1 person

Answers

1. \$7 and \$8

2. 11 people

3. \$248

