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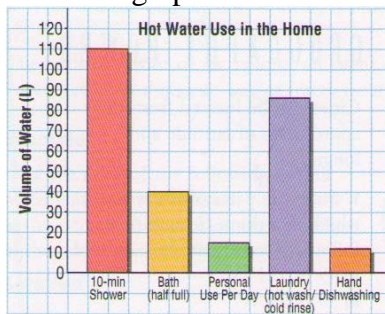
## Chapter 7 Statistics and Probability (1) Homework

1. Barry conducted a survey to find out which of the following team nicknames grade 8 students like most: Bears, Lions, Tigers, Eagles, or Wolves. Each student was limited to one choice.

- Complete the survey sheet.
- How many students chose Bears?
- List the choices from most popular to least popular.
- How many students were surveyed?

Survey Sheet		
Nickname	Tally	Frequency
Bears		
Lions		
Tigers		
Eagles		
Wolves		

2. The bar graph shows how much hot water is used for activities in the home.



- About how much hot water is used for a bath if the tub is half full?
- About how much hot water is used for a 10-min shower? A 2-min shower?
- Which activity uses 7 times more hot water than hand washing?

3. The following are the elevations of the world's seven highest cities. Display these data on a bar graph.

Addis Ababa, Ethiopia	2450 m
Bogotá, Colombia	2639 m
Calgary, Canada	1045 m
Johannesburg, South Africa	1734 m
Mexico City, Mexico	2309 m
Nairobi, Kenya	1820 m
São Paulo, Brazil	776 m

4. The table gives the average daily temperature, in degrees Celsius, for each month in Casablanca, Morocco, and Vienna, Austria. Display these data on a double broken-line graph.

Average Daily Temperature (°C)					
	Casablanca	Vienna		Casablanca	Vienna
January	12	0	July	22	20
February	13	1	August	23	19
March	14	5	September	22	16
April	16	10	October	20	10
May	18	15	November	16	5
June	20	18	December	13	1

5. The breakdown of residential energy use is as shown. Display these data on a circle graph.

Space Heating	67%
Water Heating	17%
Appliances	14%
Lighting	2%

6. The following shows what 1 L of gasoline energy provides. Display these data on a pictograph.

Car	10.5 Passenger-kilometres
City Bus	42 Passenger-kilometres
Boeing 767	5 Passenger-kilometres
Train	30 Passenger-kilometres

7. Find the mean, median, mode, and range of these data: 83, 82, 83, 85, 83, 82.
8. List the following.
- a. five different numbers with a median of 8
  - b. six different numbers with a mean of 7
  - c. six different numbers with a median of 10
9. A herd of 12 cows has a mass of 4560 kg. What is the mean mass of the cows? A 432 kg cow is added to the heard, what is the new mean mass of the cows?
10. Twelve friends enter a mini pie-eating contest and manage to eat the following number of mini pies: 16, 13, 17, 6, 23, 18, 20, 23, 15, 11, 12, and 18. a. What is the mean and median number of mini pies eaten? b. What would the new mean and median be if the person that ate 13 mini pies had managed to eat 25 of them?
11. In a set of 18 numbers, the mean of the first twelve numbers is 9, and the mean of the last six numbers is 12. What is the mean of the entire set of numbers?