Stat 1012. Lesson 3 - 4 exercises

1. Find the mean, median and mode for the following data:
   a) $2.10, $2.10, $2.10, $2.10, $2.10, $2.10
   b) $2.10, $2.10, $2.10, $1.90, $1.90, $1.90
   c) $2.10, $2.10, $2.10, $2.10, $1.80, $1.80
   d) $1.50, $1.50, $1.70, $2.30, $2.40, $2.60

2. The statistics textbook " _Statistics for Management and Economics_ " can be ordered online from different online resources. The sample of the following prices: $112, $114, $135, $140, $171, $189 has been taken from the internet (http://www.booksprice.com). What is the mean price for this statistics textbook?

3. A sample of households that subscribe to a local phone company revealed the following number of calls received last week:

Number of calls	15	20	30	40	total
Frequency	4	8	7	5	24

Determine the mean, the mode and the median number of calls received.

4. Consider these ten values a sample: -2, -1, -1, 0, 0, 0, 1, 2, 2, 2. Determine the mean, variance and standard deviation.

5. The ages of a sample of Canadian tourists flying from Toronto to Hong Kong were: 32, 21, 60, 47, 54, 17, 72, 55, 33, and 41.

   a) Compute the mean.

   b) Compute the standard deviation.

6. Determine the mean, mode and median for the following numbers: 2, 4, 8, 4, 6, 2, 7, 8, 4, 3, 8, 9, 4, 3, 5.

7. The annual incomes ($ thousands) of the five vice-presidents of TMV Industries are: $125; $128; $122; $133; and $140. Consider this a population.

   a) What is the mean income?

   b) What is the population variance?

   c) The standard deviation?

8. The frequency distribution shown represents the weekly mortgage interest rates for a 60-week period. Determine the average weekly rate from these data

Age (years)	Frequency
6.25% - under 6.50%	1
6.50% - under 6.75%	5
6.75% - under 7.00%	21
7.00% - under 7.25%	20
7.25% - under 7.50%	12
7.50% - under 7.75%	1

9. Match the following histograms with the corresponding statements:
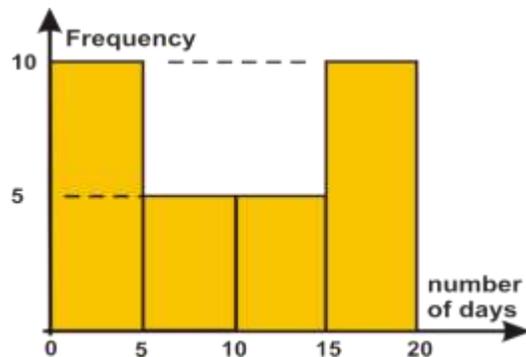

a)

b)

c)

d)
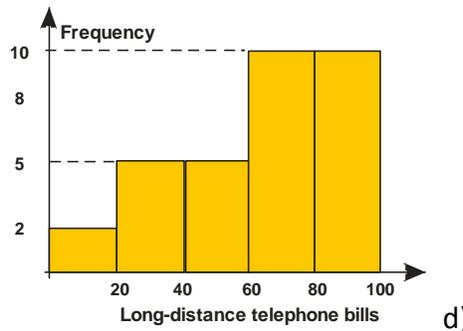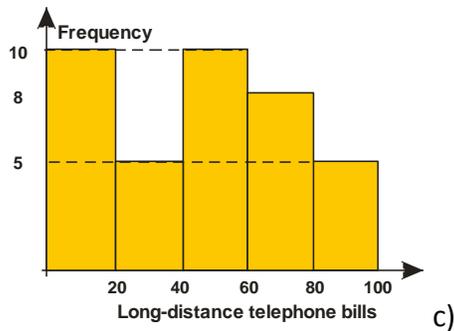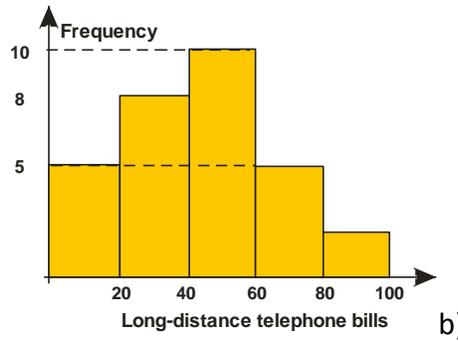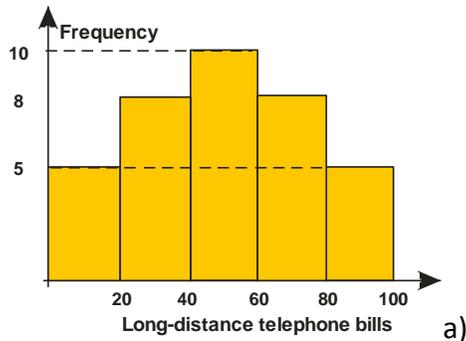
1. 25 people pay no more than $60

2. This histogram is skewed to the left

3. The mean = $50

4. The median < the mean

10. The following histogram shows the lead time (elapsed time between when an order is placed and when it is filled) for a sample of recent orders of a large Internet retailer. The lead times are reported in days.

a) Construct a frequency distribution.

b) Estimate the mean.

c) Estimate the variance.

d) Estimate the standard deviation.

11. The provincial Motel Owner Association conducted a survey regarding weekday motel rates in the northern part of the province. Listed below is the room rate for fishermen for a sample of 10 motels: $101; $97; $103; $110; $78; $87; $101; $80; $106; $88

    a) Compute the variance.

    b) Determine the sample standard deviation.

12. The following values are the starting salaries, in thousands of dollars, for two samples of five accounting graduates from two different colleges. Determine the means and the standard deviations. Which college gives you more chances to have the average salary?

College I: $20; $25; $35; $30; $40;   College II: $35; $35; $30; $25; $25.

13. SCCoast, an Internet provider, developed the following frequency distribution on the age of Internet users. Estimate the

mean and the standard deviation.

Age (years)	Frequency
10 to under 20	3
20 to under 30	7
30 to under 40	18
40 to under 50	20
50 to under 60	12