

## Chapter 9 Pre-test practice

Name: \_\_\_\_\_

1. In which of the distributions below is the mean equal to the range, to the mode and to the median?

A) 1, 1, 1, 1, 1

C) 1, 1, 1, 2, 2

B) 1, 3, 3, 3, 5

D) 1, 2, 2, 2, 3

2. You are a travel agent who has to organize a tour of Montreal for a group of 25 people. You know the following about the group:

- The range in age is 80 years.
- The mean age is 40 years.
- The median age is 15 years.
- The modal age is 10 years.

Given this information, which of the statements below is necessarily **TRUE**?

- A) All the people in the group are about the same age.
- B) More than half the people are less than 10 years old.
- C) At least one person is 25 years old.
- D) At least one person is older than 65.

3. At a gymnastics competition, each judge gives a mark between 0 and 10 to the different participants. The marks obtained by one participants are as follows:

6, 7, 5, 7, 8, 9, 6, 7, 7, 8.

Which of the following statements is **TRUE**?

- A) Removing the highest and lowest results will change the mean.
- B) The mode, the median and the mean have the same value in this distribution.
- C) 50% of the results obtained by this participant are less than the mean.
- D) The median is greater than the mean of the results in this distribution.

4. The following **12** measures, in grams, were recorded in the course of a biology experiment :

3, 4, 5, 5, 5, 6, 8, 8, 10, 12, 18, 21.

The mean of this distribution is 8.75 g. Which of the following statements is **TRUE**?

- A) There are two modes in this distribution.
- B) There are exactly six measures higher than the median.
- C) The median is one of the measures in the distribution.
- D) In this distribution, the mean is less than the median.

5. Given the following distribution: 12, 13, 15, 18, 20, 22, 22, 33, 34, 36

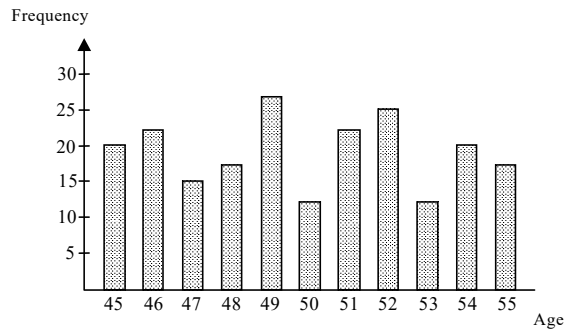
A) Find the range. \_\_\_\_\_

C) Find the median. \_\_\_\_\_

B) Find the mode. \_\_\_\_\_

D) Find the mean. \_\_\_\_\_

6. The bar graph to the right shows the distribution of a company's employees in the 45 to 55 year-old range. What is the mode of this distribution?

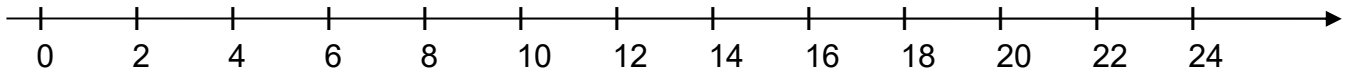


Mode is \_\_\_\_\_

7. The following scores were obtained from 20 people in a psychology experiment in which memory was tested.

5 6 6 7 7 7 8 9 10 12 14 16 16 16 17 17 18 18 20 24

Construct the box-and-whisker graph for this data.  
(Clearly label your diagram.)



8. Flash Cinema kept track of the number of afternoon customers it got over ten consecutive days:

57, 71, 95, 100, 100, 65, 86, 90, 60, 100

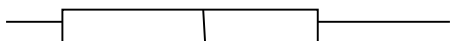
It costs Flash Cinema \$500 a day to operate and the price of admission is \$6 per person.

**Write a recommendation to the cinema owner based on two facts derived from the data above.**

**Solutions:**

1.D; 2.D; 3.B; 4.B; 5.A) 24, B) 22, C) 21, D) 22.5; 6. 49;

7. min=5; Q1=7; Q2=13; Q3=17; max=24



8. mean = 83 tickets/night; revenue=\$498/night, not enough

Possible recommendations: 1) Raise ticket price by 50cents. 2) Advertise more.

3) Cancel the show if less than 83 tickets are sold. 4) Sell more at snack bar....etc