Construction of a Grouped Frequency Distribution

A. Choose the correct answer:

- 1. What is the first step in constructing a grouped frequency distribution.
 - a) Draw a histogram b) Find the range of data
 - c) Calculate the mean d) Arrange data in ascending order
- 2. If the data values are 7, 12, 15, 19, 22, 26, 29, which class interval is most appropriate.
 - a) 0-5 b) 5-10 c) 10-15 d) 5-10, 10-15, 15-20 and so on
- 3. The size of a class interval is called.
 - a) Frequencyb) Class sizec) Class markd) Mid-point
- 4. Which one is necessary to avoid when constructing a grouped frequency table.
 - a) Equal class width b) Overlapping intervals
 - c) Frequency column d) Class limits
- 5. The number of observations falling in a particular class interval is called.
 - a) Class limit b) Frequency
 - c) Class width d) Cumulative frequency

B. Write the Missing Terms to Complete the Sentences:

- 1. The ______ of a class interval is the sum of its upper and lower limit divided by 2
- 2. A grouped frequency table is used when the number of observations is ______
- 3. The first column of a grouped frequency distribution contains _____
- 4. Data must be _____ before grouping into intervals
- 5. The class width is calculated by dividing the range by the number of ______

C. Mark each sentence with a True (\checkmark) or False (X):

- 1. Grouped frequency distribution is only useful for small data sets
- 2. Class intervals must be non-overlapping in grouped frequency tables _____
- 3. The difference between the highest and the lowest observation gives the class width
- 4. Frequencies can be fractions in a grouped frequency table _____
- 5. Range of data is needed to decide the class intervals

D. Figure out the answers to these questions:

- 1. Construct a grouped frequency table for the data 5, 8, 10, 13, 15, 18, 20, 22, 25, 27 using a class width of 5
- 2. What will be the range if the highest observation is 95 and the lowest is 32?
- 3. Find the class mark for the interval 40-50.
- 4. Create class intervals and corresponding frequencies from the following marks scored by 15 students 35, 42, 46, 53, 58, 61, 63, 67, 70, 72, 75, 77, 80, 85, 88 with class size 10.
- 5. What will happen if overlapping class intervals are used in a grouped frequency distribution?

E. Challenge yourself with these questions:

- 1. Write the steps to construct a grouped frequency distribution table.
- 2. If the class intervals are 10-20, 20-30, 30-40, find the class size.
- 3. Why is it necessary to have equal class widths in a grouped frequency table?
- 4. If a student scores are 56, 60, 62, 65, 70, 72, 75, construct class intervals of size 5.
- 5. Give two examples where grouped frequency distribution is useful in real life situations.