Assignment 2

Q. A hospital has 15 rooms and each room has 10 admitted patients. A puzzle for mental exercise was given to every patient in each room. The time (in minutes) taken to complete the puzzle was recorded as follows and stored in a data vector as puzzletime.

8, 13, 21, 9, 15, 29, 6, 13, 24, 27, 3, 22, 21, 20, 21, 20, 8, 27, 10, 17, 9, 7, 13, 15, 14, 23, 11, 20, 12, 21, 11, 27, 29, 3, 6, 6, 18, 8, 17, 6, 5, 11, 24, 22, 19, 20, 22, 21, 8, 20, 17, 28, 13, 4, 7, 24, 23, 16, 19, 29, 16, 20, 21, 23, 8, 1, 11, 16, 9, 16, 13, 10, 17, 18, 28, 10, 23, 27, 16, 8, 14, 9, 9, 18, 14, 21, 28, 16, 20, 11, 26, 7, 5, 25, 29, 27, 17, 24, 23, 27, 13, 3, 7, 27, 28, 18, 7, 9, 13, 9, 5, 27, 26, 27, 9, 4, 7, 10, 19, 19, 13, 9, 20, 16, 27, 20, 3, 26, 23, 11, 28, 21, 5, 19, 11, 18, 12, 22, 9, 11, 5, 28, 3, 12, 9, 11, 8, 17, 6, 11

1. The output of the command range(puzzletime) is
2. How many patients completed the puzzle in exactly 20 minutes?
3. How many patients completed the puzzle in less than 8 minutes?
4. How many patients completed the puzzle in more than or equal to 25 minutes?
5. How many patients completed the puzzle in more than 10 minutes and less than 16 minutes?
6. Suppose we want to convert the data in puzzletime into a grouped data having class intervals [1,5), [5,10), [10,15), [15,20), [20,25) and [25,30). Which of the following is the correct frequency table of values in puzzletime?
7. If exactly 55 patients took more than or equal to x minutes, then x = ?
8. In which 5 minutes interval did most number of patients finish the puzzle?

Q. Following are the scores of 250 students in a test with minimum and maximum marks being 0 and 100 respectively. The scores are stored in a data vector scores.
99.86, 42.72, 3.66, 66.89, 96.60, 30.08, 49.50, 16.84, 89.14, 14.97, 66.86, 38.32, 71.90, 9.50, 66.92, 58.83, 38.06, 79.95, 95.30, 97.51, 49.67, 50.54, 93.64, 74.30, 76.82, 63.32, 36.54, 90.87, 72.37, 61.98, 89.44, 98.19, 27.07, 63.97, 55.35, 92.40, 32.97, 61.37, 34.40, 42.48, 77.67, 99.31, 54.64, 69.46, 49.88, 86.76, 31.95, 4.55, 36.77, 36.91, 56.45, 54.44, 76.53, 15.97, 18.22, 41.34, 50.17, 18.82, 96.60, 93.58, 8.85, 30.27, 44.18, 26.85, 54.82, 64.24, 46.20, 3.00, 96.14, 10.01, 75.64, 93.18, 93.32, 15.88, 84.66, 21.08, 13.76, 75.89, 68.41, 51.36, 21.58, 13.85, 82.75, 71.88, 57.93, 6.68, 24.99, 10.24, 24.60, 95.14, 37.91, 97.11, 66.32, 87.91, 85.58, 64.32, 16.11, 37.22, 42.69, 89.64, 89.96, 48.29, 27.71, 89.71, 23.08, 53.02, 4.22, 18.84, 17.41, 73.05, 33.26, 71.83, 8.28, 69.65, 51.27, 75.61, 63.67, 8.24, 1.15, 83.05, 23.08, 26.37, 19.74, 34.79, 53.58, 66.88, 99.58, 63.30, 60.82, 43.71, 39.76, 54.97, 13.55, 81.42, 26.04, 2.18, 69.18, 36.76, 67.77, 40.94, 37.88, 6.44, 24.03, 31.21, 44.02, 50.53, 1.29, 78.89, 78.18, 41.64, 13.12, 60.07, 37.38, 7.18, 38.98, 75.08, 17.65, 11.13, 19.43, 44.85, 63.36, 68.78, 91.34, 71.68, 90.47, 82.64, 15.24, 24.96, 14.07, 1.79, 35.54, 62.56, 76.10, 7.22, 96.00, 49.04, 93.72, 41.35, 6.35, 31.58, 14.91, 46.10, 48.83, 25.15, 15.98, 18.06, 54.47, 88.50, 87.06, 16.53, 47.53, 46.51, 68.91, 28.35, 68.89, 93.41, 21.07, 25.42, 93.02, 94.64, 93.94, 9.75, 89.52, 1.20, 34.41, 65.48, 58.09, 32.27, 55.53, 22.79, 5.41, 87.13, 52.83, 14.59, 17.07, 29.37, 94.04, 24.53, 62.59, 58.07, 83.71, 86.55, 23.05, 34.52, 35.22, 50.84, 71.60, 27.66, 5.29, 72.83, 34.59, 68.72, 6.51, 29.91, 40.08, 45.36, 16.20, 1.91, 22.10, 86.63, 44.83, 6.13, 93.60, 73.23, 2.01, 5.79, 72.59, 94.20, 1.20, 91.42

1. The outcome of the R command range(scores)is

2. Suppose we want to convert the data in scores into a grouped data having class intervals of width 10. Which of the following is the correct R command to obtain the frequency table of values in the scores:

3. Suppose we want to convert the data in scores into a grouped data having a class intervals of width 25. Which of the following is the correct frequency table of values in the scores:

4. The total number of students having scores less than 50% is

5. The total number of students having scores more than or equal to 60% is

6. The difference between the number of students having a scores below 20 and above or equal to 80 is

7. The command to find out the cumulative sum of the data in scores based on class interval 20 is

8. The cumulative relative frequencies of the data in scores based on the class interval 20 are

9. The cumulative relative frequency of scores up to the class intervals of 20-40 is

10. The difference between the relative cumulative frequencies up to the class intervals 0-20 and 80-100 is