

Mth 23, Homework 2 on Section 2.1

Due by Wed, Sept 16.

Try these 4 questions. Write all your working out and answers on your own notepaper. Please use lots of space and as many pages as you want, so I can include corrections or comments - otherwise I will ask you to redo it. You do not need to write the questions, but it is very important that you show clearly any work you had to do to get your answers. Each question is worth 3 points for a total of 12.

Section 2.1 Frequency Distributions, Histograms

- (1) A survey asked a sample of 12 people at a concert their ages and got these answers:

18 18 19 20 22 23 25 25 29 30 35 41

Use five classes to break up this data.

- (a) Find the class width.

(Hint: that's the largest data value minus the smallest, then divide by the number of classes we want and finally go to the next whole number.)

- (b) Make a frequency table showing class limits, class boundaries, midpoints (also called class marks), and frequencies.

- (2) (a) From your work in question 1, draw a histogram with five bars for this age data that shows the class boundaries.

- (b) What type of distribution does the data have: mound-shaped symmetric, uniform, bimodal, skewed left or right?

- (3) The police checked speeds on a highway and got these results for 20 cars (in mph):

70 75 52 64 53 60 76 59 71 68
72 61 67 58 79 65 70 62 63 72

Group the data into 4 classes and make a frequency distribution table showing class limits, class boundaries, frequency and relative frequency.

- (4) Draw a histogram from your work in question 3 that shows both frequency and relative frequency, and name the type of the distribution (mound-shaped symmetric, uniform, bimodal, skewed left or skewed right).

Many of you are using AI to help with homework questions. You can paste them in and get step by step answers most of the time. If you are using AI, the smart way is:

- Study the relevant class notes and section in the textbook first.
- Try the homework questions yourself.
- Use AI help if you're having trouble.
- Make sure you understand the answers you're handing in - there will be similar questions on tests.

If you're still stuck on a question:

- Ask me about it after class.
- Come to my office hours: Mon 12:00 - 1:00, Wed 12:00 - 1:00 in CP 317.
- Go to the Math Tutorial Lab in-person in CP 303 or online.

Note – If I don't have time to grade every question then I will just grade two random ones. Then your score will be awarded as follows

- First graded question: 25%
- Second graded question: 25%
- You provided answers to all questions: 25%
- Homework was done neatly and submitted on time: 25%