

1. 2 pts. each Identify the data set's level of measurement.
 - (a) The top five German language books selling on Amazon at this moment: (1) Frühstück mit Elefanten; (2) Fifty Shades of Grey: Befreite Lust; (3) Bürgerliches Gesetzbuch; (4) Was ich an dir liebe; (5) Einfach schlank und fit.
 - (b) The political parties in the German Bundestag are: Union, SPD, Grünen, Linke.
 - (c) The average ticket prices for 10 Broadway shows in 2012: \$110, \$88, \$181, \$97, \$67, \$133, \$72, \$103, \$62, \$79.
 - (d) The heights in feet of a sample of pine trees are: 45, 67, 54, 24, 63, 34, 16, 83, 26, 84, 38, 57, 27, 82.
 - (e) The daily high temperatures in degrees Fahrenheit for Mohave in a week are: 93, 91, 86, 94, 102, 104, and 101.

2. 10 pts. Create a frequency distribution having six classes for the following data representing high temperatures during January 2017 for Lansdale:

46	37	46	51	33	31	23	23
25	38	51	63	55	32	36	41
41	43	43	39	45	46	43	43
52	54	41	36	41	36	36	

3. 10 pts. Make a relative frequency histogram out of the frequency distribution created in the previous problem, labeling each class using class midpoints.
4. 10 pts. Make a frequency polygon out of the frequency distribution created in Problem 2.
5. 10 pts. Make an ogive graph out of the frequency distribution created in Problem 2.
6. 10 pts. Make a stem-and-leaf plot of the data in Problem 2 using five stems.
7. 15 pts. Find the mean, median, and mode of the following data:

18 36 29 30 30 28 31 27 29 24 29 28 25 20

8. 15 pts. Find the range, standard deviation, and variance for the data set in Problem 7, assuming it's a sample taken from a population.
9. Using the data set in Problem 2, do the following.
 - (a) 10 pts. Find the quartiles Q_1 , Q_2 , and Q_3 .
 - (b) 5 pts. Construct a box-and-whisker plot.
10. 10 pts. In an astronomy course the final grade is broken down as follows:

- 24% = Midterm Exam
- 20% = Term Paper: Why Horoscopes Are Utter Nonsense
- 18% = Asteroid Hunting
- 12% = Name That Constellation
- 10% = Setting Up the Telescope Without Wrecking it
- 10% = The Hardy-Weinberg Algorithm for Counting Shooting Stars Without Having to Take Off Your Shoes
- 6% = Exhibiting an Ability to Fog a Mirror

If Pavel got a 67% on the midterm, 92% on the term paper, 81% on the asteroid hunt, 100% on naming constellations, 53% on setting up a telescope, 39% on counting shooting stars, and 85% on fogging a mirror, what is Pavel's overall average for the course?

11. 5 pts. each The age distribution of the denizens of San Ysidro, New Mexico, is shown in the table below.

Ages	Frequency
0 – 14	38
15 – 29	20
30 – 44	31
45 – 59	53
60 – 74	36
75+	15

Find the following.

- The probability of randomly selecting someone aged 45 to 59.
- The probability of randomly selecting someone who is not aged 60 to 74.