

# Homework 1

Math 243

Due June 25th at 11:59 PM

## Textbook Exercises

**Chapter 1:** 23, 25, 28, 31, 36, 38

**Chapter 2:** 26, 31, 33, 38, 39, 41

**Exercise 1:** Below is a table giving the percentage of high school students who used certain forms of tobacco within the past 30 days of being surveyed.

Product	2011	2012	2013	2014	2015
Any	24.3	23.3	22.9	24.6	25.3
Cigarettes	15.8	14.0	12.7	9.2	9.3
Cigars	12.6	11.6	11.9	8.2	8.6
Pipes	4.5	4.0	4.1	1.5	1.0
Smokeless tobacco	7.3	6.4	5.7	5.5	6.0
E-cigarettes	1.5	2.8	4.5	13.4	16.0

- Draw a bar chart of the use of any tobacco product between 2011 and 2015. Describe the pattern of change.
- Draw bar charts of the use of each individual product between 2011 and 2015.
- Summarize the overall trends that you see in parts a) and b).

- d) Why doesn't it make sense to use pie charts for the previous parts?

**Exercise 2:**

- a) Create a list of seven numbers such that the minimum is 2, the maximum is 10, the median is 7, the first quartile is 3, and the third quartile is 9.
- b) Characterize all such lists — that is, state the conditions any such list must satisfy. Which of the seven numbers are free to vary, and how can they vary?