AP STATISTICS
## (1.1 Review Problems)

1. Define "statistics"

    (A)   Numbers with meaning
    (B)   The science of assigning probabilities
    (C)   Making sense out of data
    (D)   Making an "educated guess"

2. When do you use exploratory analysis?

    (A)   When you are exploring a theory
    (B)   When an entire population is available
    (C)   When samples must be collected
    (D)   When conducting a survey or experiment

3. What are the two ways to describe a distribution of a variable?

    (A)   Stem-leaf plots and normal distributions
    (B)   Mean- standard deviations and Median- range
    (C)   Categorical and quantitative
    (D)   Graphs and numbers
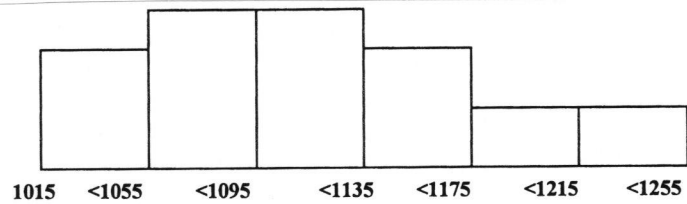
4. Describe this distribution of ages in a city:
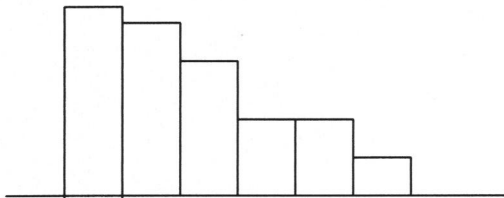
    (A)   Skewed right
    (B)   Skewed left
    (C)   Symmetric
    (D)   Continuous

5. Below are the tips (in dollars) that a waiter has earned at a local restaurant over the past few weeks. Generate a histogram on your calculator and describe the graph. Estimate the center.

    { 48, 80, 35, 47, 30, 85, 20, 70, 80, 100, 35, 33, 40, 38, 39, 35, 36, 26, 85, 25, 53, 54, 60, 65 }
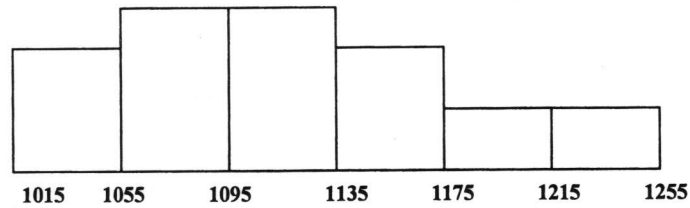
    (A)   Skewed right, center is between 44 and 51
    (B)   Skewed left, center is between 44 and 51
    (C)   Symmetric, center is between 44 and 51
    (D)   Skewed right, center is between 68 and 84

6. Which of the following is a sketch of a histogram for the following SAT scores? 1080, 1120, 1035, 1030, 1015, 1165, 1060, 1165, 1120, 1180, 1105, 1105, 1040, 1070, 1065, 1140, 1130, 1215, 1080, 1135
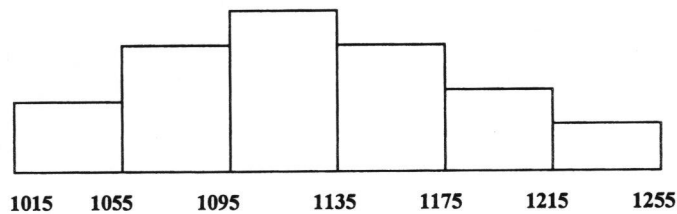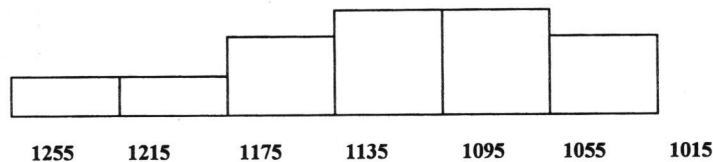
(A)

| 1015 | <1055 | <1095 | <1135 | <1175 | <1215 | <1255 |

(B)

| 1015 | 1055 | 1095 | 1135 | 1175 | 1215 | 1255 |

(C)

| 1015 | 1055 | 1095 | 1135 | 1175 | 1215 | 1255 |

(D)

| 1255 | 1215 | 1175 | 1135 | 1095 | 1055 | 1015 |

7. You want to measure the physical fitness of students at your school. Suggest at least 5 variables that you might use to measure fitness.

8. Hallux abducto valgus (HAV) is a deformation of the big toe that is not common in youth and often requires surgery. Doctors used X-rays to measure the angle (in degrees) of deformity in 38 consecutive patients under the age of 21 who came to a medical center for surgery to correct HAV. The angle is a measurement of the seriousness of the deformity. Here are the data:

28	32	25	34	38	26	25	18	30	26
28	13	20	21	17	16	21	23	14	32
25	21	22	20	18	26	16	30	30	20
50	25	26	28	31	38	32	21		

Make a stemplot. Are there any outliers? Write a brief discussion of the shape, center and spread of the angle of deformity among young patients needing surgery for this condition.