

Problem I. A sample of 25 employees from the local manufacturing plant was obtained and the length of time (in months) worked was recorded for each employee. Below are the data for the 25 employees. For your convenience the data have been sorted from largest to smallest. (17 points total)

52 59 59 60 61 62 63 65 66 67 67 68 69
72 73 73 74 74 75 79 79 80 83 86 94

(a) To your right is a frequency table for the data using 9 classes. I have given you the class boundaries using the convention we discussed in class. Note that the variable X is the length of time worked (in months). Please use the data above to complete the table. (5 points)

Class Limits For X	Number of Employees	Percent of Employees
$50 \leq X < 55$	1	4
$55 \leq X < 60$	2	8
$60 \leq X < 65$	4	16
$65 \leq X < 70$	6	24
$70 \leq X < 75$	5	20
$75 \leq X < 80$	3	12
$80 \leq X < 85$	2	8
$85 \leq X < 90$	1	4
$90 \leq X < 95$	1	4

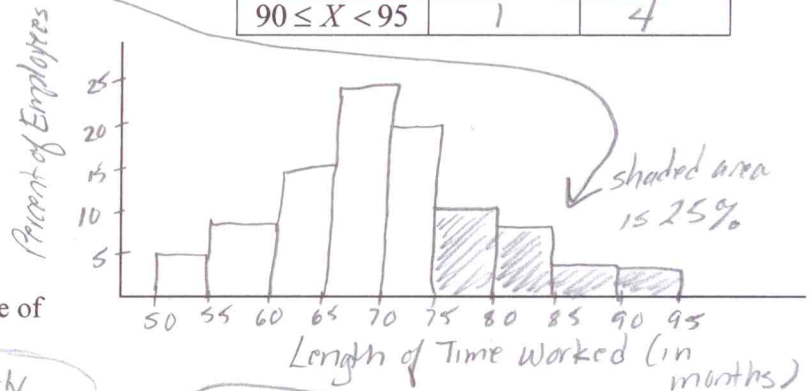
(b) Use the frequency table to graph a *percent* frequency histogram (i.e. graph the percent of employees on the vertical axis) on the axes provided below. Be sure to label your axes! (4 points)

(c) What percent of the employees have worked at the plant for at least 75 months? Shade the area on the histogram that corresponds to this percent. Clearly indicate this on the histogram. (3 points)

$\frac{7}{25} = .28$ 28%

(d) Find the five number summary for this data. Clearly indicate your answers. (3 points)

min = 52
 $Q_1 = 62.5$
med = 69
 $Q_3 = 77$
max = 94



(e) Circle all words below that describe the shape of this distribution: (2 points)

Symmetric OR Skewed Left Slightly Skewed Right Unimodal Uniform

Problem II. A sample was taken of the verbal SAT scores of applicants to a California State College. Below is a boxplot of the scores. Use the boxplot the answer the following. (2 points each, 4 total)

1. Based on this boxplot, the interquartile range of the scores is closest to (circle one)

- a. 200 b. 400 c. 500 d. 600.

2. About 25% of the applicants had SAT verbal scores exceeding what score?

600

