

## Week 01 Assignment

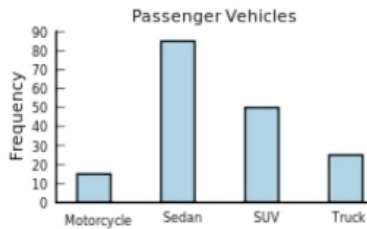
### Problem 1

The following frequency distribution presents the frequency of passenger vehicles that pass through a certain intersection from 8:00 AM to 9:00 AM on a particular day.

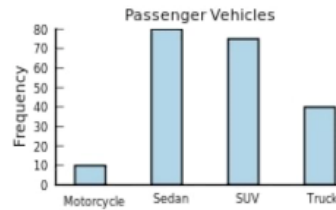
Vehicle Type	Frequency
Motorcycle	5
Sedan	95
SUV	65
Truck	30

Construct a frequency bar graph for the data.

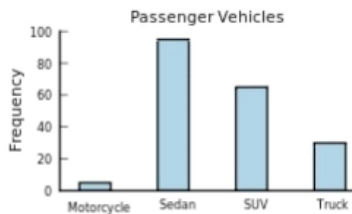
A)



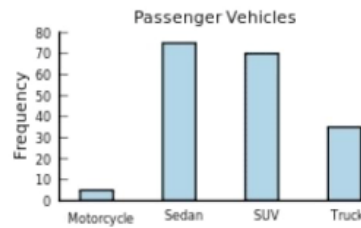
B)



C)



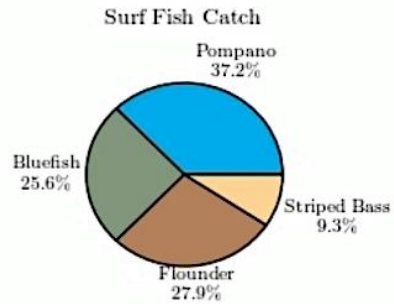
D)



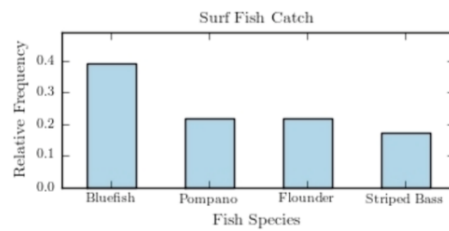
**Answer: C**

## Problem 2.

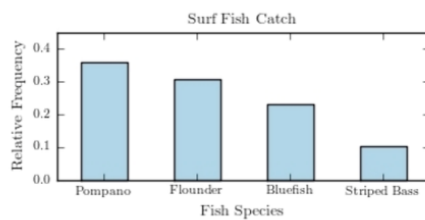
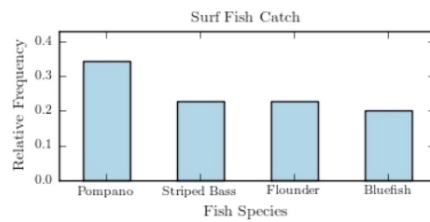
The following pie chart presents the percentages of fish caught in each of four ratings categories. Match this pie chart with its corresponding Pare-to chart.



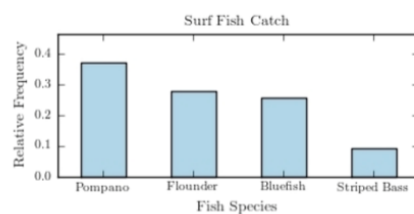
A



B.



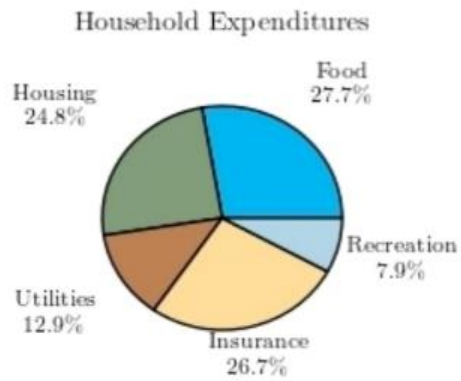
D



**Answer: D.**

### Problem 3

Following is a pie chart that presents the percentages spent by a certain household on its five largest annual expenditures. What percentage of the money spent was spent on food, housing, and utilities?



A) 60.4%

B) 65.4%

C) 52.5%

D) 47%

**Answer: B**

#### Problem 4.

The following data shows prices of meal options at Bob's Burgers. Prices of Meal Options at Bob's Burgers

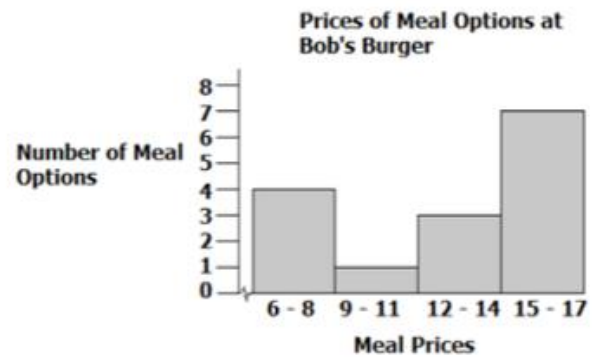
6 7 7 8 9 14 14 14 15 15 15 15 16 16 17

Which histogram correctly displays the information above?

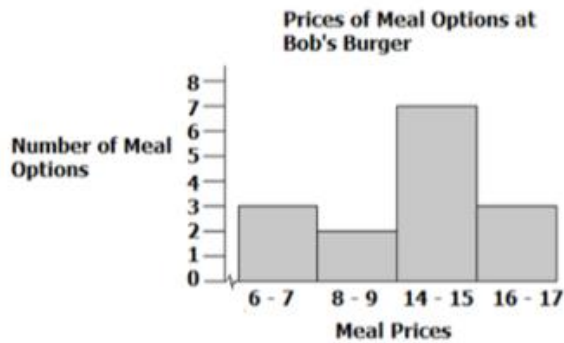
A



B



C



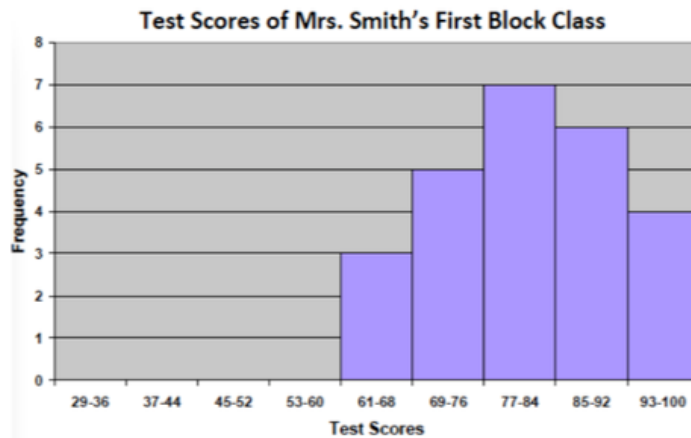
D



Answer: C.

**Problem 5.**

The histogram below shows the scores for Mrs. Smith's first block class at Red Rock Middle School.



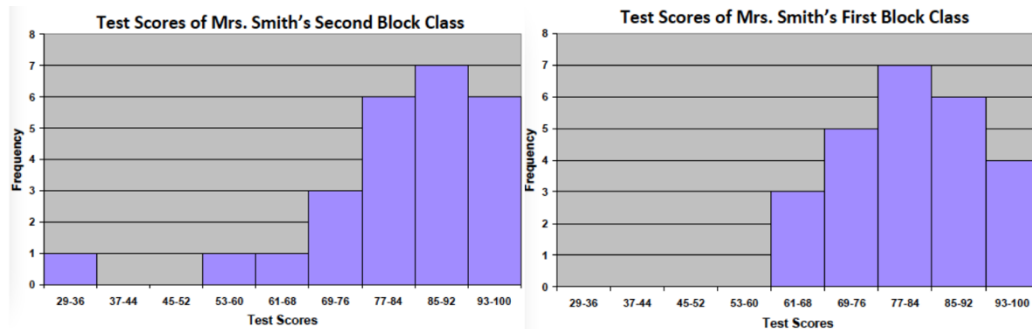
If an 85 is the lowest score a student can earn to receive a B, how many students received at least a B?

- A) 4
- B) 6
- C) 10
- D) 15

**Answer: C**

### Problem 6.

The histograms below show the scores for Mrs. Smith's first and second block classes at Red Rock Middle School.



Compare the histograms using the following information:

- 69 and above is passing
- 68 or below is failing

Which of the following statements is true?

- A) The number of students that passed the test is the same in both classes.
- B) More students passed in the first block than in the second block.
- C) More students passed in the second block than in the first block.
- D) Cannot be determined based on the graphs given.

**Answer: A**

### Problem 7

A study of 1106 college students asked about their preference for online resources. The following relative frequency distribution was determined as a result of the survey.

Resource	Relative Frequency
Google or Google Scholar	0.736
Library database or website	0.136
Wikipedia or online encyclopedia	0.094
Other	0.034

Of the 1106 students who participated in the survey, approximately how many chose Google or Google Scholar?

- A. 34
- B. 292
- C. 736
- D. 814

**Answer: D**

**Problem 8.**

A recent statistics exam yielded the following 25 scores. Construct a frequency table with the class limits shown below.

44 45 51 55 59 63 63 67 68 74 77 77 77 79 80 81 82 86 87 87 89 90 91 96 97

**A**

Class Limits	Frequency
41-50	2
51-60	2
61-70	5
71-80	6
81-90	7
91-100	3

**B**

Class Limits	Frequency
41-50	3
51-60	2
61-70	4
71-80	7
81-90	6
91-100	3

**C**

Class Limits	Frequency
41-50	2
51-60	3
61-70	4
71-80	6
81-90	7
91-100	3

**D**

Class Limits	Frequency
41-50	2
51-60	3
61-70	5
71-80	5
81-90	6
91-100	4

**Answer C.**



**Problem 9fi**

The following table presents the purchase totals (in dollars) of a random sample of gasoline purchases at a convenience store. Construct a frequency distribution using a class width of 10 and using 0 as the lower-class limit for the first class.

76.59	48.55	93.66	60.17	39.10
93.28	65.43	34.12	80.41	77.16
80.07	93.46	39.19	43.84	44.70
68.74	89.98	6.97	52.86	68.93

**A.**

Convenience Store Gas Purchases	
Amount (dollars)	Frequency
0.00-9.99	1
10.00-19.99	0
20.00-29.99	0
30.00-39.99	3
40.00-49.99	3
50.00-59.99	1
60.00-69.99	4
70.00-79.99	2
80.00-89.99	4
90.00-99.99	2

**B.**

Convenience Store Gas Purchases	
Amount (dollars)	Frequency
0.00-9.99	1
10.00-19.99	0
20.00-29.99	0
30.00-39.99	4
40.00-49.99	2
50.00-59.99	1
60.00-69.99	4
70.00-79.99	2
80.00-89.99	3
90.00-99.99	3

**C.**

Convenience Store Gas Purchases	
Amount (dollars)	Frequency
0.00-9.99	1
10.00-19.99	0
20.00-29.99	0
30.00-39.99	3
40.00-49.99	3
50.00-59.99	1
60.00-69.99	4
70.00-79.99	2
80.00-89.99	3
90.00-99.99	3

**D.**

Convenience Store Gas Purchases	
Amount (dollars)	Frequency
0.00-9.99	1
10.00-19.99	0
20.00-29.99	1
30.00-39.99	2
40.00-49.99	3
50.00-59.99	1
60.00-69.99	4
70.00-79.99	2
80.00-89.99	3
90.00-99.99	3

**Answer: C.**

## Problem 10

What do we call a part of a population used to describe the whole group?

- a. Population
- b. Sample
- c. Statistic
- d. Parameter

**Answer: B.**

## Problem 11.

Elizabeth asks her friends how many brothers and/or sisters they have at home. What type of data is she collecting?

- a. Numerical
- b. Categorical
- c. None of these answers are correct
- d. Statistical

**Answer: A.**

## Weekly Quiz 01 Summary

**Types of Descriptive Statistics**

Table and Chart: Numerical Data ▼

**comma separated numeric raw data**


95,100,100,80,90,90,100,100,100,100,60,90,85,80,75,80,90,95,90,90,75,75,70,90,100,90,95,100,80,90,80,100,85,45,85,100,100,90,90,100,80,95

**Summary Types**

Frequency Tables ▼

**Boundary [must be equally spaced!]**

40,50,60,70,80,90,100



Report bugs to C. Peng

The input data values:

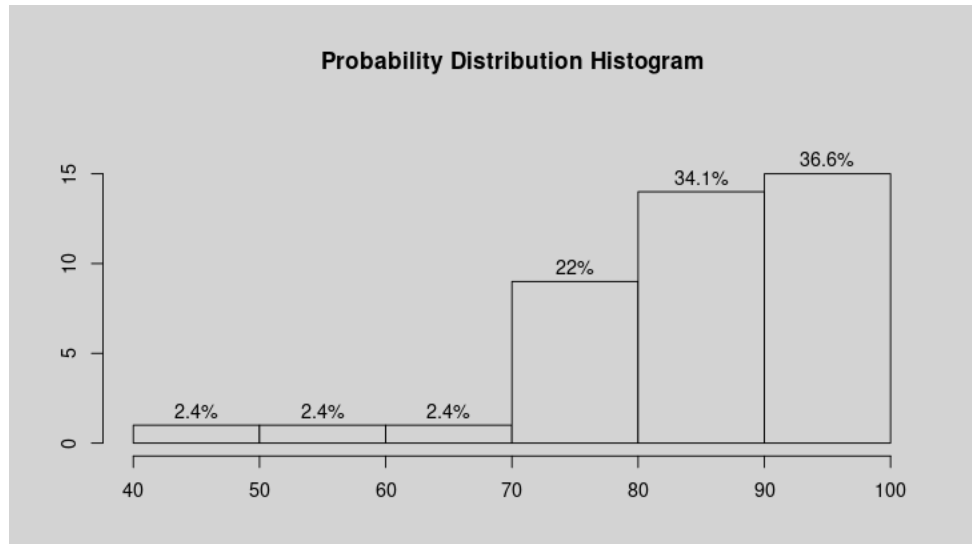
95, 100, 100, 80, 90, 90, 100, 100, 100, 60, 90, 85, 80, 75, 80, 90, 95, 90, 90, 75, 75, 70, 90, 100, 90, 95, 100, 80, 90, 80, 100, 85, 45, 85, 100, 100, 90, 90, 100, 80, 95

The sorted input data values:

45, 60, 70, 75, 75, 75, 80, 80, 80, 80, 80, 80, 85, 85, 85, 90, 90, 90, 90, 90, 90, 90, 90, 90, 90, 95, 95, 95, 95, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100, 100

The class boundary is: 40,50,60,70,80,90,100

cut.data.freq	Freq	midpts	rel.freq	cum.freq	rel.cum.freq
[4e+01,5e+01]	1	45.00	0.02	1	0.02
(5e+01,6e+01]	1	55.00	0.02	2	0.05
(6e+01,7e+01]	1	65.00	0.02	3	0.07
(7e+01,8e+01]	9	75.00	0.22	12	0.29
(8e+01,9e+01]	14	85.00	0.34	26	0.63
(9e+01,1e+02]	15	95.00	0.37	41	1.00



### 1. Five Number Summary :

The five-number summary is used to describe the shape of the distribution of a given numerical data. It consists of five numbers: minimum data value, first quartile, median, the third quartile, and the maximum data value.

The five-number summary of this given data set is:

stats	value
Min.	45.00
1st Qu.	80.00
Median	90.00
3rd Qu.	100.00
Max.	100.00

### 2. Boxplot :

The boxplot is a geometric representation of the five-number summary. The boxplot of the given data set is given below.

