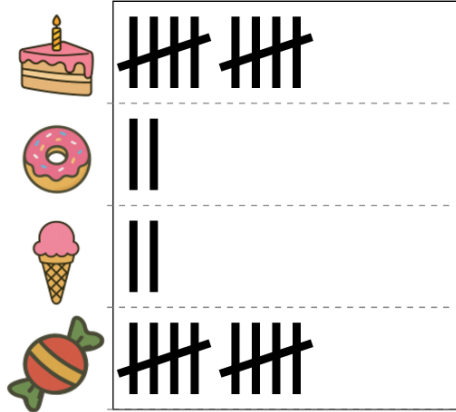




Data Analysis

- 1 What is the average number of kids who like each treat?



A 0	B 8	C 9
D 1	E 2	F 6

- 2 What is the median of this data set?
89, 53, 43, 54, 63, 36, 30, 45

A 59	B 49
C 58.5	D 39.5

- 3 Find the mode of these numbers

4, 4, 11, 2, 3

A 8	B 0	C 2
D 7	E 4	F 9

- 4 Would the mean or the median be a better measure of center for this data set?

Data set: 46, 50, 48, 47, 43, 45, 50

A Median	B Mean
-------------	-----------

- 5 Find the mean of these numbers

14, 8, 18, 8, 17

A 16	B 9	C 13
D 14	E 11	F 17

- 6 What is the standard deviation of this data set?
42, 48, 45, 44, 46

A 3	B 2
C 1	D 4

- 7 What is the interquartile range (IQR) of this data set?
39, 28, 90, 54, 56, 38, 59, 51

A 62	B 96
C 57.5	D 19



Data Analysis

- 8 What is the population variance of this data set?

28, 36, 40, 32, 34
mean = 34

A	16	B	3
C	20	D	4

- 9 Is this variable qualitative or quantitative?

Number of emails received before noon

A	Qualitative
B	Quantitative

- 10 Which of these variables is quantitative?

Quantitative

- A Height of a randomly selected student
B Favourite school subject of a student
C Mode of transportation used to travel to work

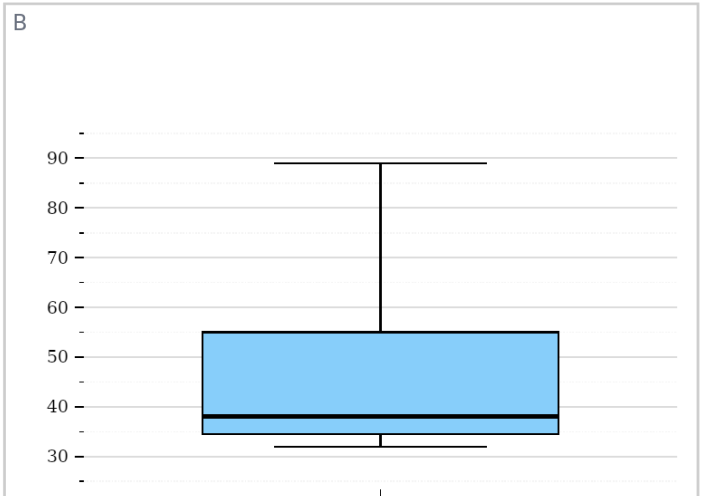
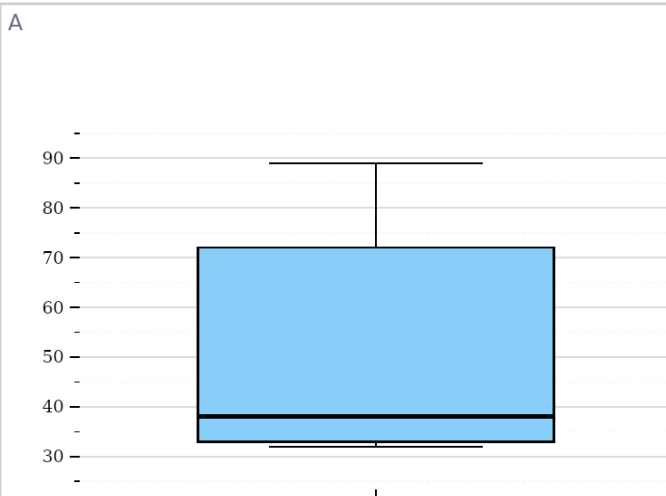
- 11 What type of correlation does this R value indicate?

-0.3

- A weak negative correlation
B no correlation
C strong positive correlation
D weak positive correlation

- 12 Which box plot represents this data set?

51, 54, 36, 32, 89, 33, 56, 38, 38

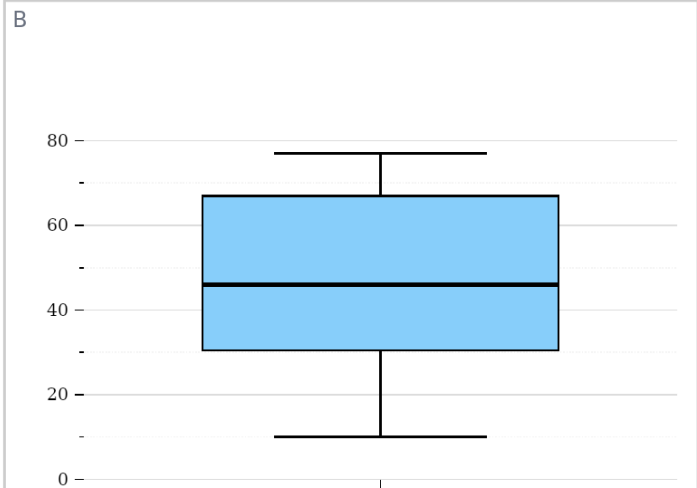
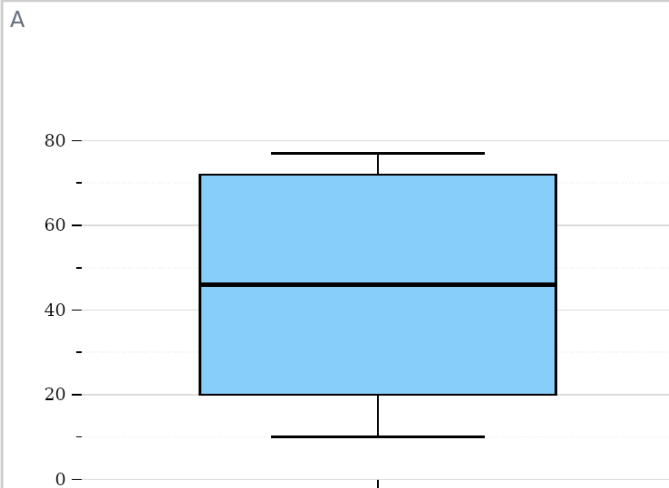




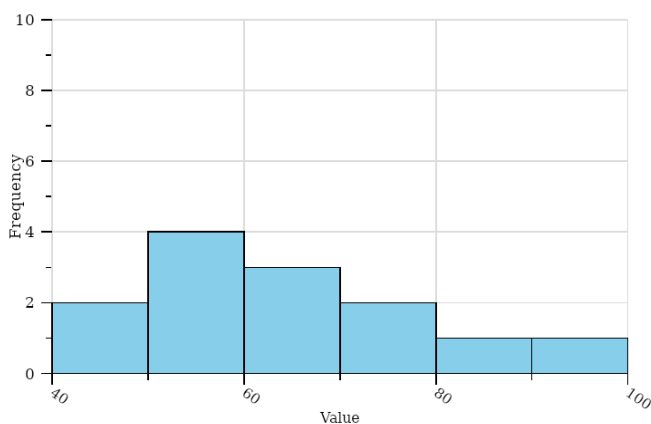
Data Analysis

13 Which box plot represents this data set?

61, 21, 40, 10, 47, 77, 46, 42, 73



14 What is the distribution type of this histogram?



A
uniform

B
right-skewed

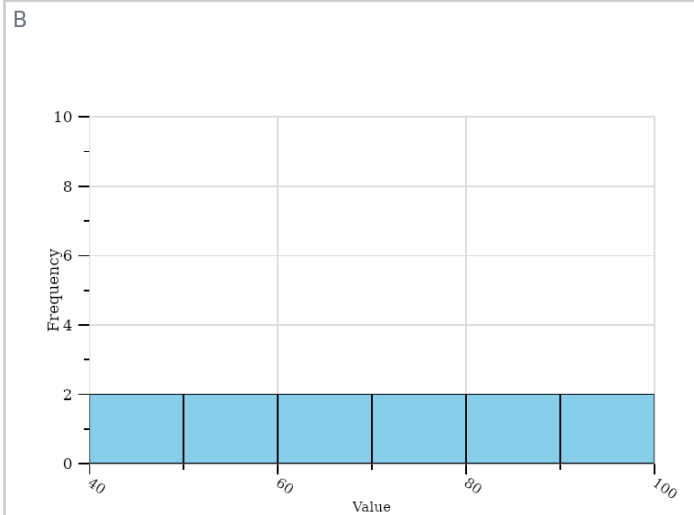
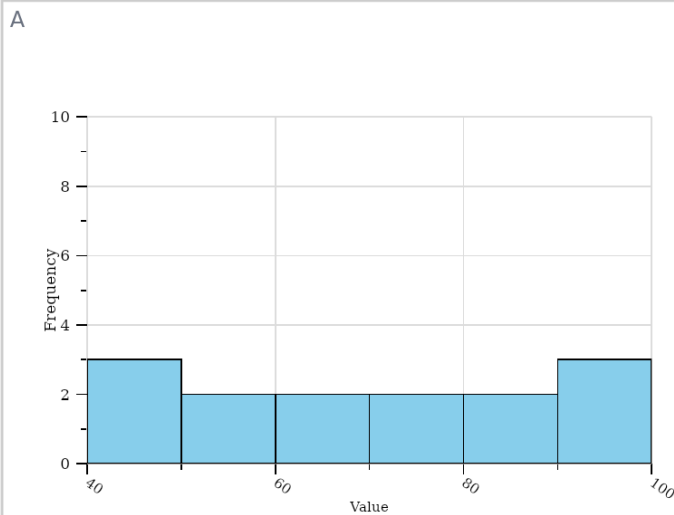
C
left-skewed

D
approximately symmetric

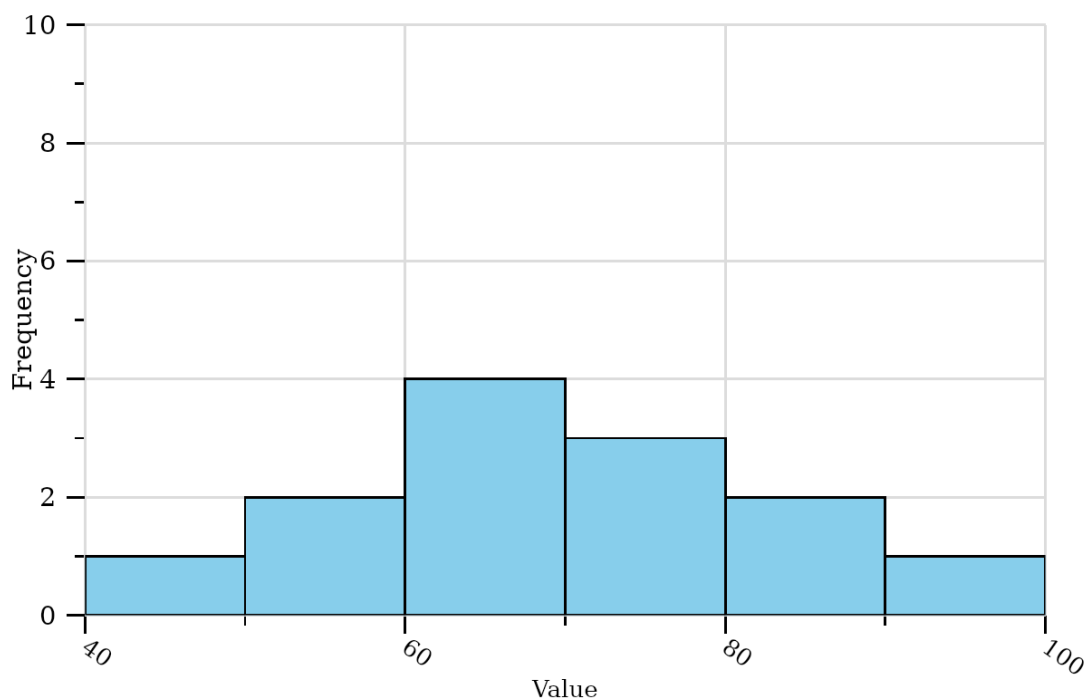


Data Analysis

15 Which histogram best matches this frequency table?



16 Which frequency table matches this histogram?

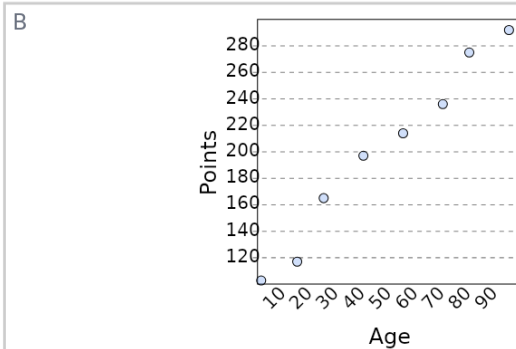
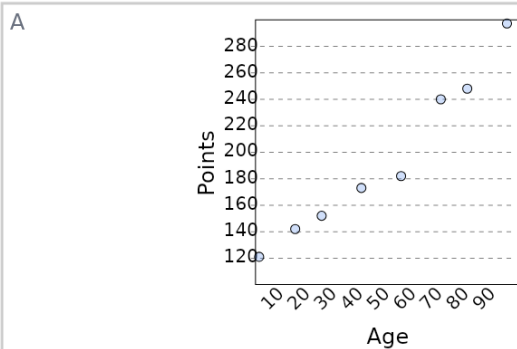




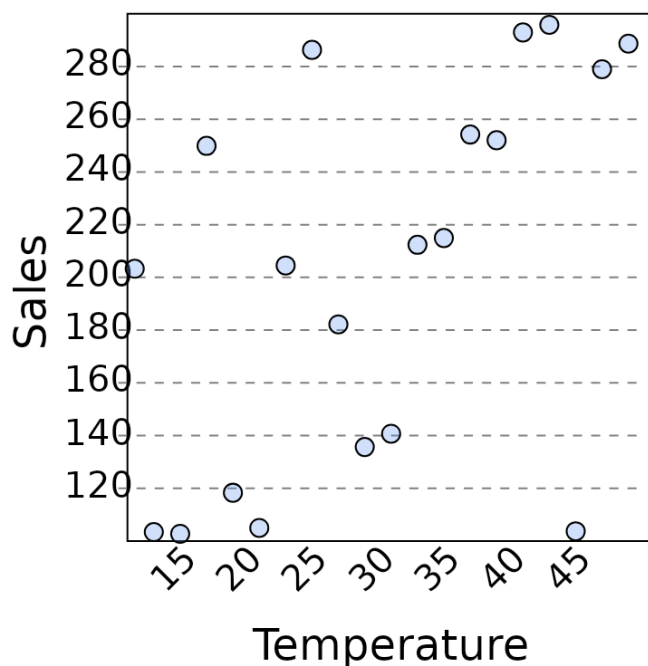
Data Analysis

17 Which scatter plot matches this data set?

Age	Points
0	121
15	142
25	152
40	173
55	182
70	240
80	248
95	300



18 What is the correlation direction and strength on this scatter plot?



A
no correlation

B
strong negative correlation

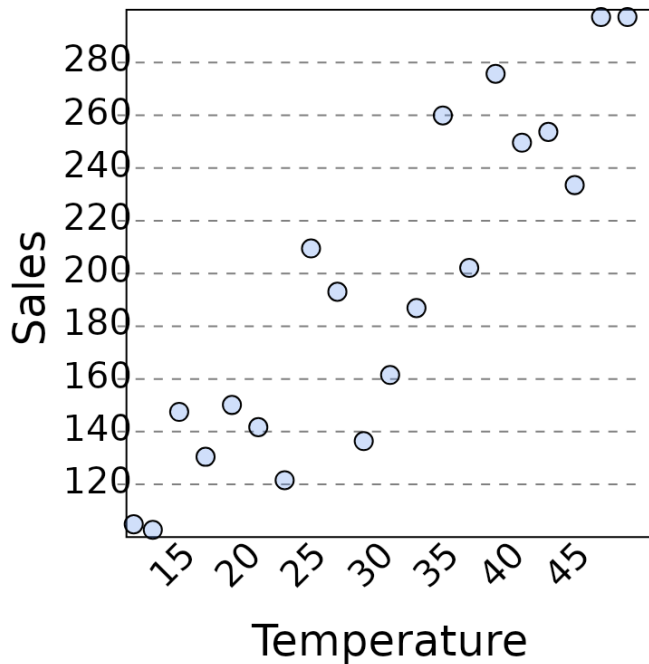
C
weak positive correlation

D
strong positive correlation



Data Analysis

19 What would be a reasonable R value for this scatter plot?



A

$$r = 0.8$$

B

$$r = 1.5$$

C

$$r = 0.3$$

20 Is this random variable discrete or continuous?

Volume of water in a lake

A

Discrete

B

Continuous

21 Which of these variables is best classified as qualitative?

Qualitative

A

Province in which a Canadian resident lives

B

Number of correct answers on a quiz

C

Number of books borrowed from a library

22 How is this variable best classified?

Fuel consumed during a road trip

A

Quantitative (continuous)

B

Quantitative (discrete)

C

Qualitative

23 What type of bias does this sampling approach introduce?

Goal: Average number of books read by adults in a year Sampling approach: Survey members of a local book club

A

Voluntary response bias

B

Measurement bias

C

Response bias

D

Selection bias



Data Analysis

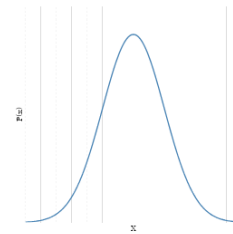
24 Which model could represent this random variable's probability distribution?

Temperature at noon tomorrow

A

X	$P(X)$
X_1	$P(X_1)$
X_2	$P(X_2)$
X_3	$P(X_3)$

B



25 Why does this sampling approach introduce bias?

Goal: Student opinion on final exams
Sampling approach: Ask, "Do you agree that stressful final exams should be eliminated?"

A Students may interpret the word "stressful" differently from one another.

B The wording of the question may encourage students to oppose final exams.

26 Is this sample representative of the population?

Population: All restaurants in a city
Sample: 250 restaurants randomly selected from the city's business registry

A No, it is not representative of the population

B Yes, it is representative of the population

27 Which sample is most representative of this population?

Population: All Grade 12 students in Ontario

A 500 Grade 12 students attending a provincial university fair

B 500 Grade 12 students randomly selected from schools in every region of Ontario