

Box-and-Whisker Plots (Box Plots)

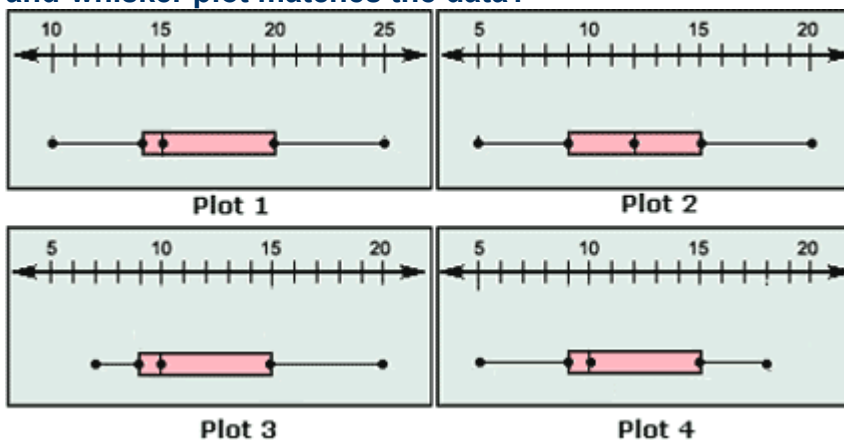
First quartile (sometimes called lower quartile) is the median of the data points to the left of the median (lower half of the data). Third quartile (sometimes called upper quartile) is the median of the data points to the right of the median (upper half of the data).

1. A sample of 10 boxes of almonds has these weights (in grams):

25, 28, 29, 29, 30, 34, 35, 35, 37, 39

Make a box plot of the data.

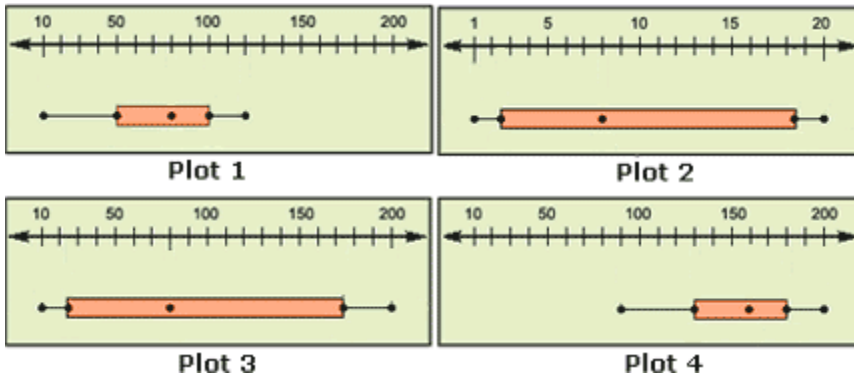
2. The owner of a super market recorded the number of customers who visited his store each hour on a particular day. The results were 15, 10, 12, 9, 18, 5, 8, 9, 15, 10, and 11. Which box-and-whisker plot matches the data?



- A) Plot 1
- B) Plot 2
- C) Plot 3
- D) Plot 4

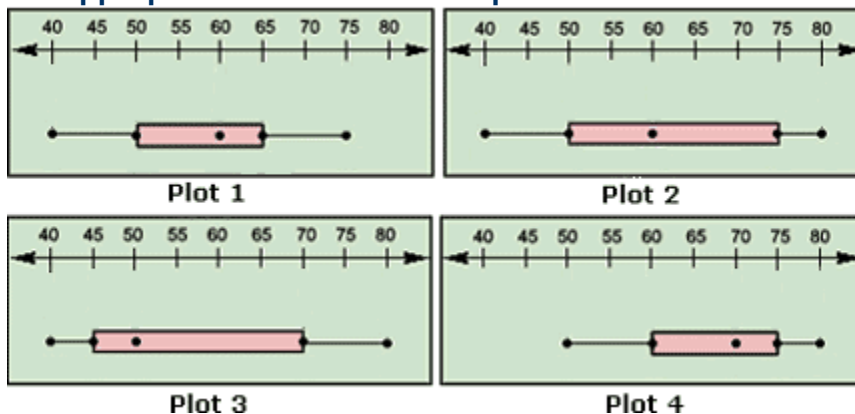
3. The table shows the different editions of the famous novel 'Harry Potter' and the income received. Which box-and-whisker plot matches the data shown in the table?

Edition	Income (Million dollars)
Harry Potter and the philosopher's stone	10
Harry Potter and the CHAMBER of SECRETS	40
Harry Potter and the Prisoner of AZKABAN	80
Harry Potter and the Goblet of Fire	150
Harry Potter and the order of the Phoenix	200



- A) Plot 1
 B) Plot 2
 C) Plot 3
 D) Plot 4

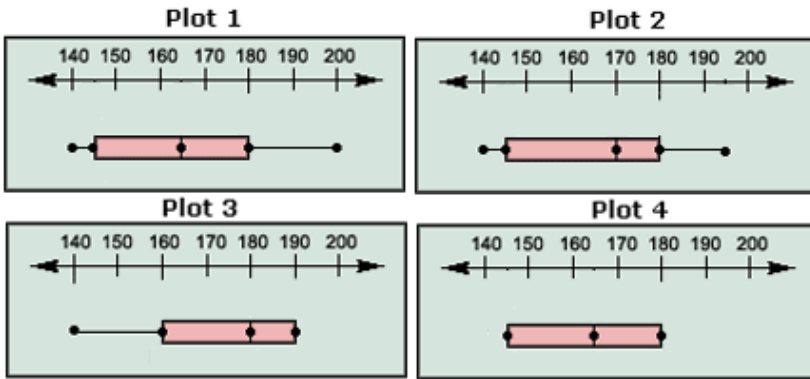
4. There is a bus transporting passengers between two places A and B. The number of passengers transported in 7 trips in a day are recorded as 50, 70, 60, 80, 40, 75, 50. Choose the appropriate box-and-whisker plot of the data and find the median of the data.



- A) Plot 1, 20
 B) Plot 4, 80
 C) Plot 3, 20
 D) Plot 2, 60

5. The table shows the heights of mountains in the U.S. Choose the appropriate box-and-whiskerplot of the data and find the average (*arithmetic mean*) height of the mountains in the U.S.

Name	Height (in 100 ft.)
Mt. McKinley	200
Mt. St. Elias	180
Mt. Foraker	175
Mt. Bona	165
Mt. Blackburn	160
Mt. Alverstone	145
Sunshine Peak	140

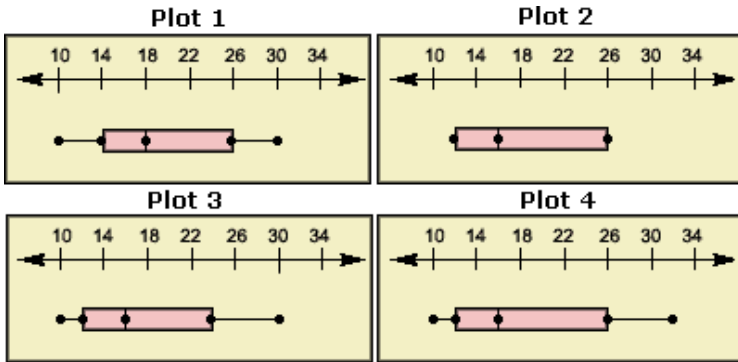


- A) Plot 1, 16643 ft
- B) Plot 2, 14000 ft
- C) Plot 3, 17732 ft
- D) Plot 4, 16500 ft

6. The table shows the number of viewers of different TV channels in the U.S. Choose the appropriate box-and-whisker plot for the data and find the mean number of TV viewers.

Number of viewers of different TV channels in U.S.

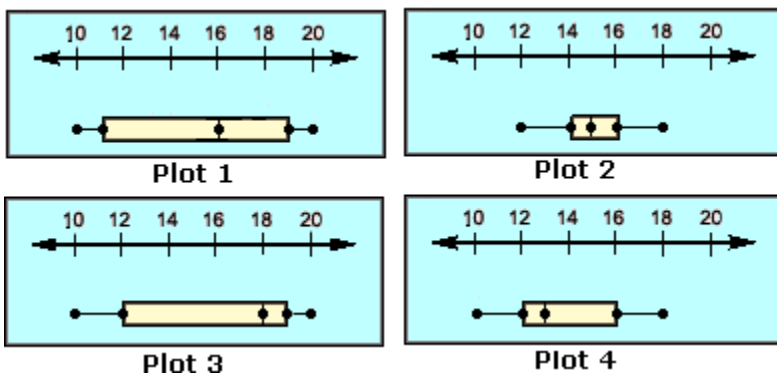
Channel	Number of viewers (in millions)
Discovery	20
Star Sports	10
Star Movies	32
Cartoon Network	16
CNN	14



- A) Plot 1, 16 millions
- B) Plot 2, 32.3 millions
- C) Plot 3, 10.5 millions
- D) Plot 4, 18.4 millions

7. The table shows the number of coins collected by 5 students. Which of the following is the equivalent box-and-whisker plot for the table? Also find out the range of the box-and-whisker plot.

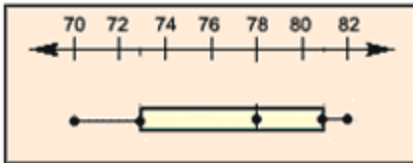
Students	Number of coins
Brian	18
Charles	10
Catherine	12
Cindy	20
Jack	16



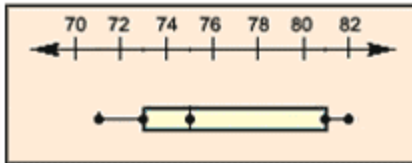
- A) Plot 1, 10
- B) Plot 3, 10
- C) Plot 4, 30
- D) Plot 2, 18

8. The table shows the percentage of scores obtained by John each year during his four year degree course. Which of the following is the equivalent box-and-whisker plot of the data? Also find out the median of scores obtained.

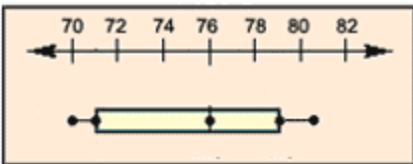
Year	Percentage of scores
1st Year	70
2nd Year	82
3rd Year	76
4th Year	80



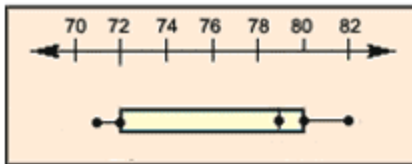
Plot 1



Plot 2



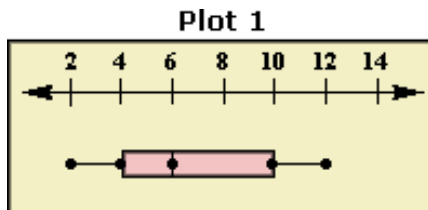
Plot 3



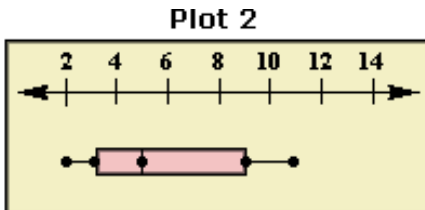
Plot 4

- A) Plot 1, 78
- B) Plot 2, 90
- C) Plot 3, 60
- D) Plot 4, 80

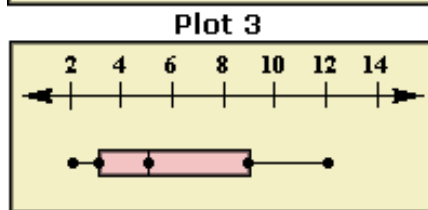
9. Choose the appropriate box-and-whisker plot of the given data set.
2, 2, 3, 5, 9, 8, 4, 7, 10, 5 and 12



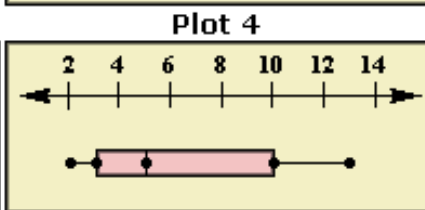
Plot 1



Plot 2



Plot 3



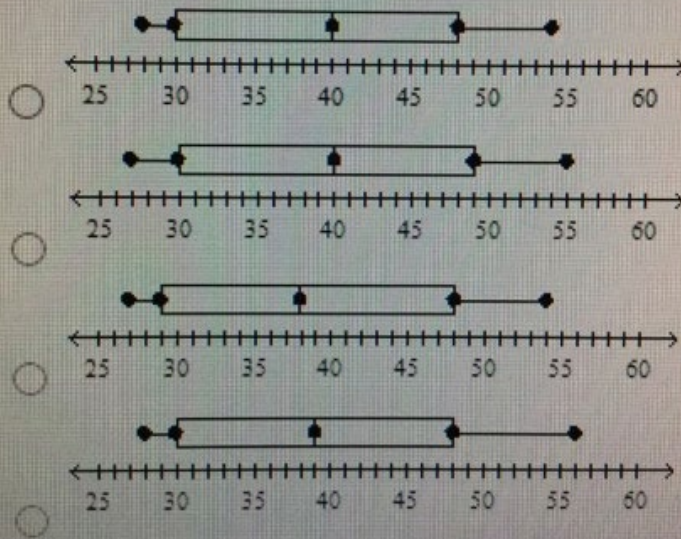
Plot 4

- A) Plot 1
- B) Plot 2
- C) Plot 3
- D) Plot 4

10.

Which box-and-whisker plot matches the data? (1 point)

34, 46, 28, 47, 39, 52, 29, 54, 41, 29, 31, 49



Answers:

1. Median is 32. 29 and 35 are the first and third quartiles, respectively.
2. D
3. C
4. D
5. A
6. D
7. A
8. A
9. C
10. The first one