



LESSON 31

Find the Box Plot

What You Need

- counters, 8 in one color per team
- Game Board

What You Do

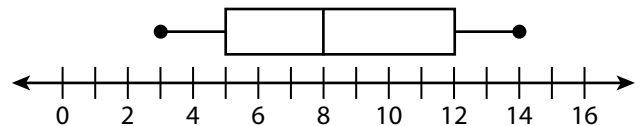
- 1 Play in two teams. Take turns. On your team's turn, choose a letter A through J.
- 2 Read the five-number summary next to that letter in the table.
- 3 Find a box plot on the **Game Board** that represents that five-number summary. The other team checks your team's work.
- 4 If your team is correct, cover that box plot with a counter. If your team is incorrect, the other team covers that box plot with a counter.
- 5 Each team takes four turns. The team with the greater number of counters on the **Game Board** wins.

	Min	Q1	Median	Q3	Max
A	2	3	8	10.5	14
B	5	7	9	13.5	16
C	3	5.5	10	11	16
D	3	4	6	11	12
E	4	8	10	13	15
F	3	6.5	10	11.5	12
G	4	6.5	10	11.5	12
H	5	5.5	6	10	16
I	2	7	10	12	14
J	3	3.5	9	10	16



Check Understanding

What is the five-number summary represented by this box plot?



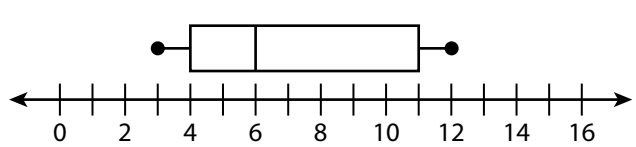
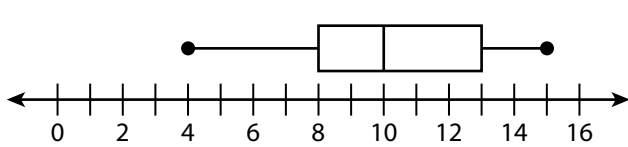
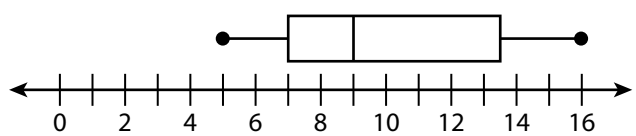
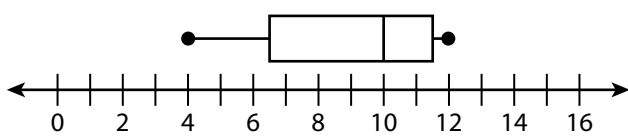
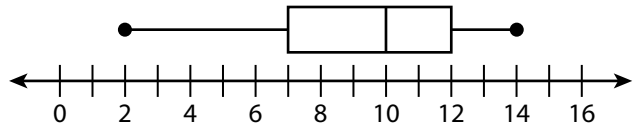
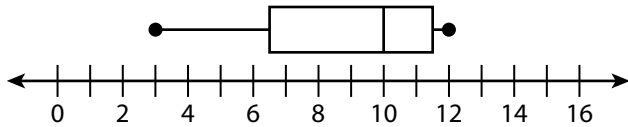
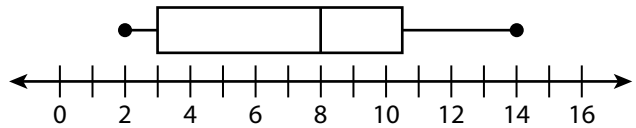
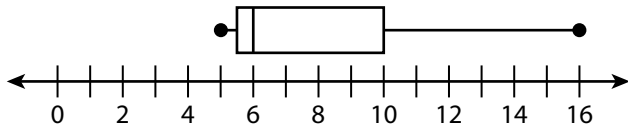
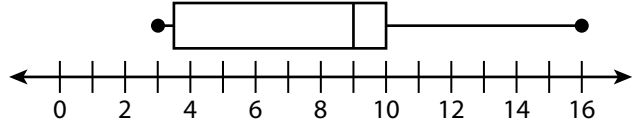
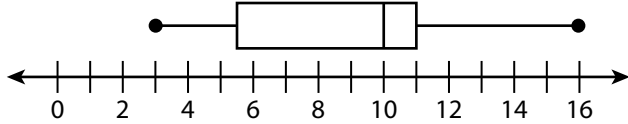
Go Further

Find the two box plots that are not covered by a game marker. Identify the five-number summary for each box plot, and then find the IQR for each data set.



Find the Box Plot

GAME BOARD





LESSON 32

Find Mean and MAD

What You Need

- Recording Sheet, 1 for each team
- paper bag holding 30 or more dried beans

What You Do

- 1 Work in two teams. Take turns.
- 2 On your team's turn, take one handful of beans from the bag. Count the beans and record the count on the **Recording Sheet**. Then return the beans to the bag.
- 3 Each team takes eight turns. At the end of eight turns, each team calculates and records the mean and the mean absolute deviation (MAD) of their data set.
- 4 Compare the results of both teams.
 - On average, which team had the largest handful?
 - Which team had more variability in their handfuls?



Check Understanding

The table shows the ages of all the students who signed up for a book club. What are the mean and MAD of the data set?

12	10	12	11	13
9	15	16	8	14



Go Further

Suppose you took one additional handful of just 3 beans. How would adding this value to your data set change the mean and MAD? Explain.



Find Mean and MAD

RECORDING SHEET

Handful	Data Value (Number of Beans)	Distance from Mean
1		
2		
3		
4		
5		
6		
7		
8		
	Mean:	MAD: