

PSSA and Keystone Exams  
Summer 2023 Workshops

# PSSA, Grade 6 Math

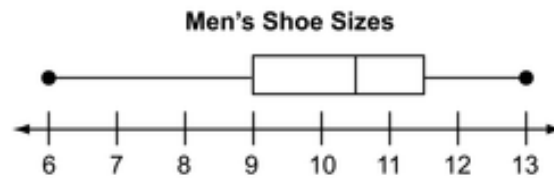
*Men's Shoe Sizes*

Handscoring  
Practice Set 2\*

\*Responses in this set do not have true scores. Apply scores based on scoring criteria.



Carlos surveyed 40 men about their shoe sizes. Carlos made the box-and-whisker plot below to display his results.



**A.** What was the **median** shoe size of the 40 men Carlos surveyed? Explain how you found your answer.

u just look at the line in the box and it shows its on 10.5

59 / 1000

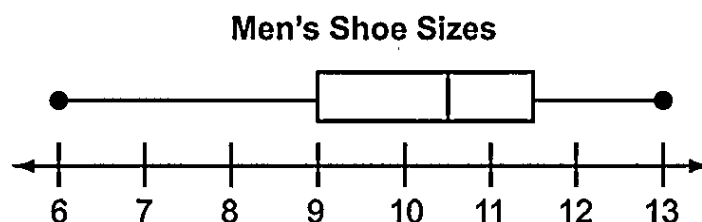
Martin thinks more men have shoe sizes between 6 and 9 than between  $11\frac{1}{2}$  and 13 because the whisker from 6 to 9 is longer than the whisker from  $11\frac{1}{2}$  to 13.

**B.** Explain why Martin is **not** correct. As part of your explanation, find the number of men with shoe sizes in each interval and describe how you found those numbers.

11/1/2

8 / 1000

25. Carlos surveyed 40 men about their shoe sizes. Carlos made the box-and-whisker plot below to display his results.



- A. What was the median shoe size of the 40 men Carlos surveyed? Explain how you found your answer.

11.5 Just looking  
between 11 and 12  
it's 11.5.

25. *Continued.* Please refer to the previous page for task explanation.

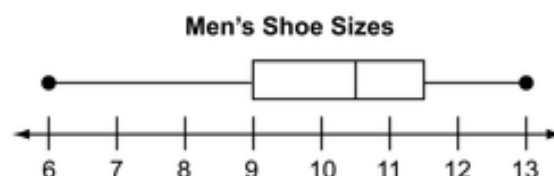
Martin thinks more men have shoe sizes between 6 and 9 than between  $11\frac{1}{2}$  and 13 because the whisker from 6 to 9 is longer than the whisker from  $11\frac{1}{2}$  to 13.

- B. Explain why Martin is not correct. As part of your explanation, find the number of men with shoe sizes in each interval and describe how you found those numbers.

7.5



Carlos surveyed 40 men about their shoe sizes. Carlos made the box-and-whisker plot below to display his results.



**A.** What was the **median** shoe size of the 40 men Carlos surveyed? Explain how you found your answer.

The median shoe size of 40 men is  $10\frac{1}{2}$ . I know this because the median of a box and whisker plot is always the line inside the box of the interquartiles. This line is half way in between the 10 and the 11 so it is  $10\frac{1}{2}$ .

223 / 1000

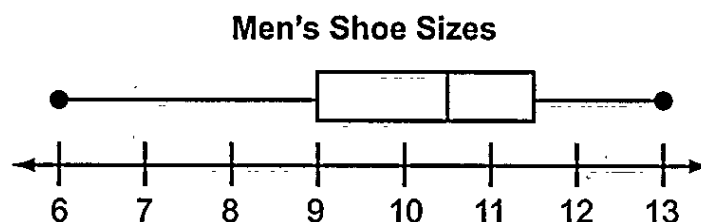
Martin thinks more men have shoe sizes between 6 and 9 than between  $11\frac{1}{2}$  and 13 because the whisker from 6 to 9 is longer than the whisker from  $11\frac{1}{2}$  to 13.

**B.** Explain why Martin is **not** correct. As part of your explanation, find the number of men with shoe sizes in each interval and describe how you found those numbers.

Martin is not correct because the 6 is just the lowest shoe size out of the 40 men Carlos surveyed. There are 10 people in each interval with those shoe sizes. I know this because each interval represents 25% of all the people Carlos surveyed and 10 is 25% of 40.

264 / 1000

25. Carlos surveyed 40 men about their shoe sizes. Carlos made the box-and-whisker plot below to display his results.



- A. What was the **median** shoe size of the 40 men Carlos surveyed? Explain how you found your answer.

The median of the data is 10.5.  
I know this because that is where  
Q2 ends, and Q3 begins.



25. *Continued.* Please refer to the previous page for task explanation.

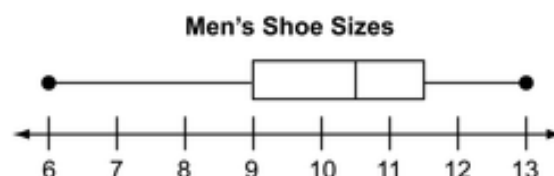
Martin thinks more men have shoe sizes between 6 and 9 than between  $11\frac{1}{2}$  and 13 because the whisker from 6 to 9 is longer than the whisker from  $11\frac{1}{2}$  to 13.

- B. Explain why Martin is not correct. As part of your explanation, find the number of men with shoe sizes in each interval and describe how you found those numbers.

Martin is not correct because the length of the whisker does not determine how many data points fall in that section; it determines if there is an outlier.



Carlos surveyed 40 men about their shoe sizes. Carlos made the box-and-whisker plot below to display his results.



**A.** What was the **median** shoe size of the 40 men Carlos surveyed? Explain how you found your answer.

I found my answer of 10.5 by looking at the box-and-whisker plot shown. I saw that the line in the middle of the box was right above 10.5, I new that meant that it must be the median.

183 / 1000

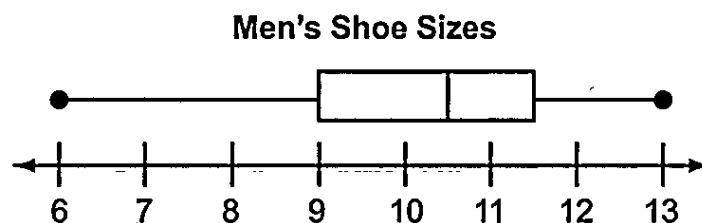
Martin thinks more men have shoe sizes between 6 and 9 than between  $11\frac{1}{2}$  and 13 because the whisker from 6 to 9 is longer than the whisker from  $11\frac{1}{2}$  to 13.

**B.** Explain why Martin is **not** correct. As part of your explanation, find the number of men with shoe sizes in each interval and describe how you found those numbers.

Martin is not correct because even though there is a longer whisker between 6 and 9, it does not mean that more people have those shoe sizes. I know this because all that the whisker is telling you is the outlier/lowest shoe size surveyed. There is only about 10 me in each interval because if there was more then 10.5 would not be the median.

343 / 1000

25. Carlos surveyed 40 men about their shoe sizes. Carlos made the box-and-whisker plot below to display his results.



- A. What was the median shoe size of the 40 men Carlos surveyed? Explain how you found your answer.

10.5, because on a box & whiskers plot, the middle line is the median, and the middle line is @ 10.5,

25. *Continued.* Please refer to the previous page for task explanation.

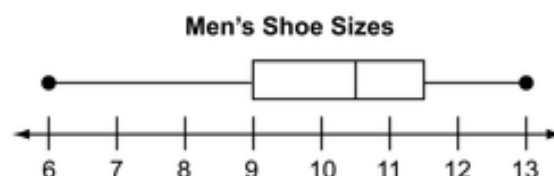
Martin thinks more men have shoe sizes between 6 and 9 than between  $11\frac{1}{2}$  and 13 because the whisker from 6 to 9 is longer than the whisker from  $11\frac{1}{2}$  to 13.

B. Explain why Martin is not correct. As part of your explanation, find the number of men with shoe sizes in each interval and describe how you found those numbers.

Martin is incorrect because the whiskers just show the smallest point and the largest in the data (13). More men are from sizes 9 to 10.5, than from 10.5 to 11.5, I found those #s by looking at the box



Carlos surveyed 40 men about their shoe sizes. Carlos made the box-and-whisker plot below to display his results.



**A.** What was the **median** shoe size of the 40 men Carlos surveyed? Explain how you found your answer.

The median shoe size of the 40 men is  $9\frac{1}{2}$ . I say this because the middle of the data would be between 9 and 10.

115 / 1000

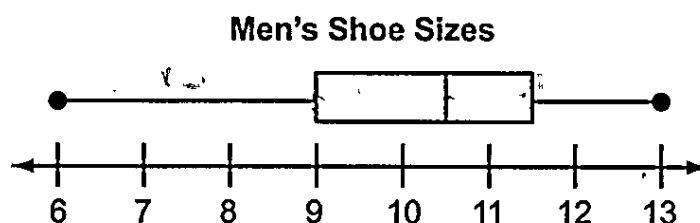
Martin thinks more men have shoe sizes between 6 and 9 than between  $11\frac{1}{2}$  and 13 because the whisker from 6 to 9 is longer than the whisker from  $11\frac{1}{2}$  to 13.

**B.** Explain why Martin is **not** correct. As part of your explanation, find the number of men with shoe sizes in each interval and describe how you found those numbers.

Martin is not correct because the whisker from 6-9 is just showing the numbers for first quartile and not the actual data. The median of the first quartile is 9. The median of the second quartile is  $11\frac{1}{2}$ . I found these numbers by looking at the lines that were beside the median.

281 / 1000

25. Carlos surveyed 40 men about their shoe sizes. Carlos made the box-and-whisker plot below to display his results.



- A. What was the median shoe size of the 40 men Carlos surveyed? Explain how you found your answer.

I know in a box-and-whisker plot in the box part where the line is shows the median and it's in between 10 and 11 so its 10.5.



25. *Continued.* Please refer to the previous page for task explanation.

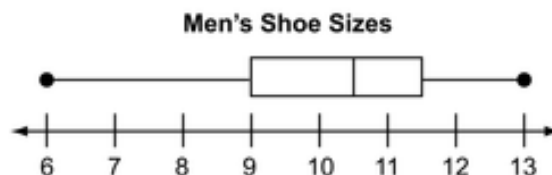
Martin thinks more men have shoe sizes between 6 and 9 than between  $11\frac{1}{2}$  and 13 because the whisker from 6 to 9 is longer than the whisker from  $11\frac{1}{2}$  to 13.

B. Explain why Martin is not correct. As part of your explanation, find the number of men with shoe sizes in each interval and describe how you found those numbers.

I know that each interval is 25% of 40 so there is 10 men in each interval so Martin is not correct that there is more men from 6 to 9 because there is the same amount of men in each interval.



Carlos surveyed 40 men about their shoe sizes. Carlos made the box-and-whisker plot below to display his results.



**A.** What was the **median** shoe size of the 40 men Carlos surveyed? Explain how you found your answer.

10.5 is the median shoe size of the 40 men carlos surveyed because the middle line in the box is the median, so what ever number below that middle line of the box, is the median and the line was inbetween the 10 and the 11 so I knew it was 10.5

244 / 1000

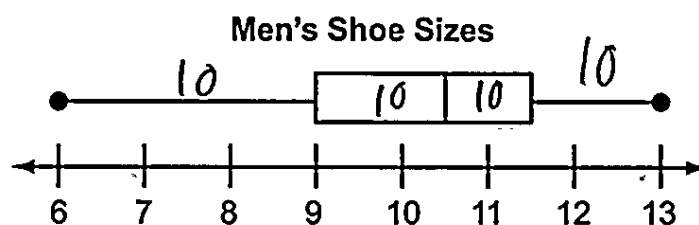
Martin thinks more men have shoe sizes between 6 and 9 than between  $11\frac{1}{2}$  and 13 because the whisker from 6 to 9 is longer than the whisker from  $11\frac{1}{2}$  to 13.

**B.** Explain why Martin is **not** correct. As part of your explanation, find the number of men with shoe sizes in each interval and describe how you found those numbers.

Martin is not correct because the reason the line is longer from 6 to 9 than  $11\frac{1}{2}$  to 13 is because the interquartile range is longer from the lowest number on the line than the bigger number on the line.

202 / 1000

25. Carlos surveyed 40 men about their shoe sizes. Carlos made the box-and-whisker plot below to display his results.



- A. What was the median shoe size of the 40 men Carlos surveyed? Explain how you found your answer.

Size 10.5 because on the box plot the middle line points to the median and that was the number it was pointing to.

25. *Continued.* Please refer to the previous page for task explanation.

Martin thinks more men have shoe sizes between 6 and 9 than between  $11\frac{1}{2}$  and 13 because the whisker from 6 to 9 is longer than the whisker from  $11\frac{1}{2}$  to 13.

- B. Explain why Martin is not correct. As part of your explanation, find the number of men with shoe sizes in each interval and describe how you found those numbers.

Martin is incorrect because  
6-9 is just representing 25% of  
the box and whisker. In each  
interval there are ten men because  
each interval is 25% of 40.



**PRACTICE SET 2\* Item:**

**Subject: Math**

**Men's Shoe Sizes**

**Grade:6**

Name \_\_\_\_\_

Number	Score	Consensus	Notes
P2-1			
P2-2			
P2-3			
P2-4			
P2-5			
P2-6			
P2-7			
P2-8			
P2-9			
P2-10			

\* Responses in this set do not have true scores. Apply scores based on scoring criteria.