Interpreting a Box & Whisker Plot

For questions 1 – 5, refer to the box & whisker graph below which shows the test results of a math class.

Test Scores (as %) for 9th Period

| 38 | 72 | 88 | 96 | 102 |

1. What was the high score on the test?
2. What percent of the class scored above a 72?
3. What was the median score on the test?
4. What percent of the class scored between 88 & 96?
5. Do you think that this test was too hard for the students? Explain.

For questions 7 – 10 refer to the box & whisker graph below that shows how much time was spent per night on homework for sophomore class at a certain high school during September.

Average Minutes Per Night Spent On Homework

| 0 | 20 | 48 | 60 | 190 |

7. What percent of the sophomores spend more than 60 minutes on homework per night?
8. What is the range of times that the middle 50% of the sophomores spend on homework per night?
9. How many sophomores do not do homework?
10. What percent of the sophomores spend less than 20 minutes per night on homework?
For questions 12 – 23, refer to the box & whisker graphs below that compare homework time per night with TV time per night for the same group of sophomores.

TV & Homework Minutes per Night

Homework Time
0  20  48  60  190

TV Time
0  15  60  110  225

12. What percent of the sophomores watch TV for at least 15 minutes per night?
13. What is the 3rd quartile for the TV time data?

14. Is it more common for a sophomore at this high school to spend more than 1 hour on homework or more than 1 hour watching TV? Explain.

For questions 15 – 23, identify if each statement is true, false, or cannot be determined.

15. Some sophomores didn’t watch TV that month.
16. The TV box & whisker graph contains more data than the homework graph.
17. 25% of the sophomores spend between 48 & 60 minutes per night on homework.
18. 15% of the sophomores didn’t watch TV that month.
19. In general, these sophomores spend more time watching TV than doing homework.
20. The TV data is more varied than the homework data.
21. The ratio of sophomores who spend more than 110 minutes per night watching TV to those who spend less is about 2:1.
22. 225 sophomores watch TV.
23. Twice as many sophomores watch TV for more than 1 hour than do homework for more than 1 hour.
For question 25, refer to the box & whisker graphs below that show the average monthly high temperatures for Milwaukee, Wisconsin & Honolulu, Hawaii.

**Average Monthly High Temperatures**

![Box and Whisker Plot for Milwaukee](image-url)

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Lower quartile</th>
<th>Upper quartile</th>
<th>Interquartile range</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>80</td>
<td>35</td>
<td>73</td>
<td></td>
</tr>
</tbody>
</table>

![Box and Whisker Plot for Honolulu](image-url)

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
<th>Lower quartile</th>
<th>Upper quartile</th>
<th>Interquartile range</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.</td>
<td>80</td>
<td>81</td>
<td>84.5</td>
<td>87 88</td>
</tr>
</tbody>
</table>

25. Complete the table using the box and whisker plots for Honolulu and Milwaukee.

<table>
<thead>
<tr>
<th></th>
<th>Milwaukee</th>
<th>Honolulu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
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Interpreting a Box & Whisker Plot

For questions 1 – 5, refer to the box & whisker graph below which shows the test results of a math class.

**Test Scores (as %) for 9th Period**

_102_  
75%  
88  
75%  

1. What was the high score on the test?  
2. What percent of the class scored above a 72?  
3. What was the median score on the test?  
4. What percent of the class scored between 88 & 96?  
5. Do you think that this test was too hard for the students? Explain.

For questions 7 – 10 refer to the box & whisker graph below that shows how much time was spent per night on homework for sophomore class at a certain high school during September.

**Average Minutes Per Night Spent On Homework**

_35%_  
_40 min._  
Can't tell  
25%  

7. What percent of the sophomores spend more than 60 minutes on homework per night?  
8. What is the range of times that the middle 50% of the sophomores spend on homework per night?  
9. How many sophomores do not do homework?  
10. What percent of the sophomores spend less than 20 minutes per night on homework?
For questions 12 – 23, refer to the box & whisker graphs below that compare homework time per night with TV time per night for the same group of sophomores.

**TV & Homework Minutes per Night**

- **Homework Time**
  - 0
  - 20
  - 48
  - 60
  - 190

- **TV Time**
  - 0
  - 15
  - 60
  - 110
  - 225

12. What percent of the sophomores watch TV for at least 15 minutes per night?

13. What is the 3rd quartile for the TV time data?

14. Is it more common for a sophomore at this high school to spend more than 1 hour on homework or more than 1 hour watching TV? Explain.

It is more common for sophomores to watch TV because 50% of the students watch greater than 1 hour of TV, but only 25% spend greater than 1 hour on H.W.

For questions 15 – 23, identify if each statement is true, false, or cannot be determined.

15. Some sophomores didn’t watch TV that month.

16. The TV box & whisker graph contains more data than the homework graph.

17. 25% of the sophomores spend between 48 & 60 minutes per night on homework.

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19. In general, these sophomores spend more time watching TV than doing homework.

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For question 25, refer to the box & whisker graphs below that show the average monthly high temperatures for Milwaukee, Wisconsin & Honolulu, Hawaii.

**Average Monthly High Temperatures**

<table>
<thead>
<tr>
<th></th>
<th>Milwaukee</th>
<th>Honolulu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>57°F</td>
<td>84.5°F</td>
</tr>
<tr>
<td>Minimum</td>
<td>26°F</td>
<td>80°F</td>
</tr>
<tr>
<td>Maximum</td>
<td>73°F</td>
<td>88°F</td>
</tr>
<tr>
<td>Lower quartile</td>
<td>35°F</td>
<td>81°F</td>
</tr>
<tr>
<td>Upper quartile</td>
<td>73°F</td>
<td>87°F</td>
</tr>
<tr>
<td>Interquartile range</td>
<td>38°F</td>
<td>6°F</td>
</tr>
</tbody>
</table>

25. Complete the table using the box and whisker plots for Honolulu and Milwaukee.