Outliers and changes in mean, median and range worksheet – Grade 7

Grade 7 · Mixed level · 20 questions · **Version X4149**

Name: _____ Date: _____ Score: ___ / 20

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1. Which value is an outlier in 40, 91, 41, 37, 40?
   A. 37 **B.** 40 **C.** 91

2. What is the range of 64, 59, 58, 64, 107?
   Answer: _____

3. Which is most affected by a very large outlier?
   A. Mean **B.** Median **C.** Mode

4. Find the median of 52, 50, 56, 114, 52.
   Answer: _____

5. Work out the range of 33, 39, 34, 43, 105, 42, 41.
   Answer: _____

6. What is the median of 16, 18, 19, 106, 22?
   Answer: _____

7. Which value is an outlier in 89, 12, 17, 21, 11, 14, 23?
   A. 11 **B.** 14 **C.** 89 **D.** 12

8. Remove the outlier from 131, 44, 43, 43, 41. By how much does the median change?
   Answer: _____

9. Remove the outlier from 19, 19, 17, 15, 13, 95, 28. By how much does the median change?
   Answer: _____

10. Find the mean of 57, 63, 60, 134, 61, to one decimal place.
    Answer: _____

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11. Find the mean of 45, 52, 50, 131, 44, 46, 49, to one decimal place.

    Answer: _____

12. What is the mean of 46, 38, 80, 39, 37, to one decimal place?

    Answer: _____

13. For 13, 16, 52, 13, 10, which average describes a typical value better?

    A. Median **B.** Mean

14. Work out the mean of 50, 53, 51, 58, 54, 65, 101, to one decimal place.

    Answer: _____

15. Every value of 21, 15, 18, 97, 21 is multiplied by 2. What is the new median?

    Answer: _____

16. 5 is added to every value of 64, 75, 63, 136, 60, 63, 68. What is the new range?

    Answer: _____

17. Every value of 94, 49, 43, 46, 41, 44, 45 is multiplied by 2. What is the new median?

    Answer: _____

18. Chloe replaces the largest value of 36, 34, 41, 95, 32 with a smaller value that is still the largest. Which stays the same?

    A. The median **B.** The mean **C.** The range **D.** All of them change

19. Every value of 54, 51, 92, 50, 53 is multiplied by 2. What is the new range?

    Answer: _____

20. Every value of 44, 56, 59, 50, 46, 53, 85 is multiplied by 5. What is the new range?

    Answer: _____

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Answer key · Version X4149

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1. **C (91)**
2. **49**
3. **A (Mean)**
4. **52**
5. **72**
6. **19**
7. **C (89)**
8. **0**
9. **1**
10. **75**
11. **59.6**
12. **48**
13. **A (Median)**
14. **61.7**
15. **42**
16. **76**
17. **90**
18. **A (The median)**
19. **84**
20. **205**

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