Mean, Median, Mode, and Range

Name: _____	Date: _____	Score: _____ / 18

Quick Review and Helpful Hints

For a data set: the *mean* is the sum divided by how many numbers there are; the *median* is the middle value once the data is ordered (average the two middle values if there is an even count); the *mode* is the value that appears most often; the *range* is the largest value minus the smallest.

▷ **Example:** Find the mean of $4,\ 8,\ 6,\ 4,\ 3$. **Work:** Add the values: $4+8+6+4+3=25$. Then divide by how many there are, which is 5: $\frac{25}{5}$.

★ **Answer:** 5

The data $3, 4, 4, 6, 8$ as a dot plot.

Practice Problems

Find the requested measure for each data set.

1. Mean of $2, 4, 6$ _____

2. Mean of $5, 5, 8, 10, 2$ _____

3. Median of $3, 7, 9$ _____

4. Median of $2, 4, 6, 8$ _____

5. Mode of $3, 3, 5, 7$ _____

6. Mode of $1, 2, 2, 2, 5$ _____

7. Range of $4, 9, 15$ _____

8. Range of $20, 5, 12$ _____

9. Mean of $10, 20, 30, 40$ _____

10. Median of $8, 3, 5, 9, 1$ _____

11. Mode of $6, 7, 7, 8, 8, 8$ _____

12. Range of $2, 2, 2$ _____

13. Mean of $7, 9, 11, 13$ _____

14. Median of $12, 4, 8, 16$ _____

Word Problems

15. Test scores are $80, 90, 85, 95, 100$. What is the mean score? _____

16. In the data $3, 5, 7, 7, 9$, what is the mode? _____

17. Daily highs were $60, 72, 68, 75, 65$. What is the range? _____

18. Ages at a table are $10, 12, 14, 16, 18$. What is the median age? _____

Answer Keys

1. $\boxed{4}$	**7.** $\boxed{11}$	**13.** $\boxed{10}$
2. $\boxed{6}$	**8.** $\boxed{15}$	**14.** $\boxed{10}$
3. $\boxed{7}$	**9.** $\boxed{25}$	**15.** $\boxed{90}$
4. $\boxed{5}$	**10.** $\boxed{5}$	**16.** $\boxed{7}$
5. $\boxed{3}$	**11.** $\boxed{8}$	**17.** $\boxed{15}$
6. $\boxed{2}$	**12.** $\boxed{0}$	**18.** $\boxed{14}$

Step-by-Step Explanations

1. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is The mean is the sum divided by the count. Add: $2 + 4 + 6 = 12$, then divide by 3: $12 \div 3 = 4$. So the final answer is 4.

2. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Add all five: $5+5+8+10+2 = 30$, then divide by 5: $30 \div 5 = 6$. So the final answer is 6.

3. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is The data is already in order, so the middle value is 7. So the final answer is 7.

4. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is With an even count, average the two middle values: $\frac{4+6}{2} = 5$. So the final answer is 5.

5. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is The mode is the most frequent value – 3 appears twice. So the final answer is 3.

6. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is 2 appears three times, more than any other, so the mode is 2. So the final answer is 2.

7. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Range is the largest minus the smallest: $15 - 4 = 11$. So the final answer is 11.

8. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Largest minus smallest: $20 - 5 = 15$. So the final answer is 15.

9. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Add: $10 + 20 + 30 + 40 = 100$, then divide by 4: $100 \div 4 = 25$. So the final answer is 25.

10. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Put them in order: $1, 3, 5, 8, 9$. The middle value is 5. So the final answer is 5.

11. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is 8 appears three times, the most, so the mode is 8. So the final answer is 8.

12. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Largest minus smallest: $2 - 2 = 0$. So the final answer is 0.

13. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Add: $7 + 9 + 11 + 13 = 40$, then divide by 4: $40 \div 4 = 10$. So the final answer is 10.

14. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Put them in order: $4, 8, 12, 16$. Average the two middle: $\frac{8+12}{2} = 10$. So the final answer is 10.

15. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is The mean is the total over the count: $80 + 90 + 85 + 95 + 100 = 450$, then $450 \div 5 = 90$. So the final answer is 90.

16. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is The most frequent value is 7 (it appears twice). So the final answer is 7.

17. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Largest minus smallest: $75 - 60 = 15$. So the final answer is 15.

18. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is The values $10, 12, 14, 16, 18$ are already ordered, so the middle is 14. So the final answer is 14.

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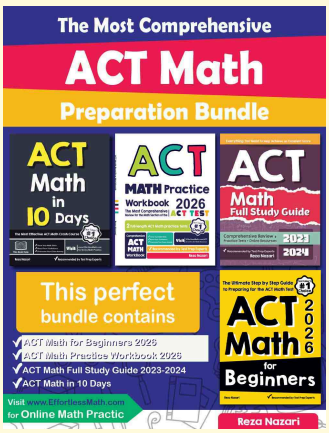

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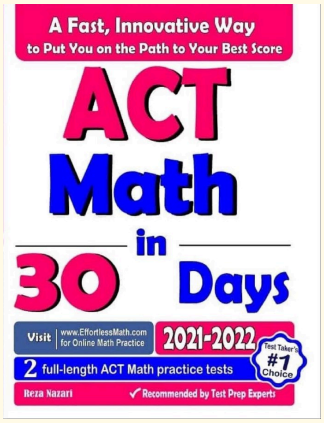

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