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CENTRAL TENDENCY: Worksheet 3

Find the mean, median and mode for the following data.

1) 5, 8, 5, 4, 3, 8, 5, 10, 2, 3

2) 8, 9, 7, 8

3) 1, 1, 1, 3, 4, 2, 1, 3, 2

4) 18, 21, 25, 14, 18, 19, 25

5) Samantha has taken 4 quizzes. Her scores were 20, 18, 15 and 17. Samantha must take one more quiz. What is the lowest score she can have to have a 17 mean average?

6) There were 5 homes that sold in St. Joe County last week. They sold for: $76,000 $81,000 $88,500 $68,500 $81,000
    What were the mean, median and mode for these prices?

KEY
CENTRAL TENDENCY: Worksheet 3

Find the mean, median and mode for the following data.

1) 5, 8, 5, 4, 3, 8, 5, 10, 2, 3

> **Mean**: (5 + 8 + 5 + 4 + 3 + 8 + 5 + 10 + 2 + 3) ÷ 10 = 53 ÷ 10 = **5.3**
> **Median:** List from small to large. 2,3,3,4,**5,5**,5,8,8,10. Middle score is the median: **5**
> **Mode**: Appears the most number of times: **5**

2) 8, 9, 7, 8

> **Mean**: (8 + 9 + 7 + 8) ÷ 4 = 32 ÷ 4 = **8**
> **Median**: List from small to large. 7,**8,8**,9.   Middle score is the median: **8**
> **Mode**: Appears the most number of times: **8** (This is an unusual example where the mean, median & mode are all the same.)

3) 1, 1, 1, 3, 4, 2, 1, 3, 2

> **Mean**: (1 + 1 + 1 + 3 + 4 + 2 + 1 + 3 + 2) ÷ 9 = 18 ÷ 9 = **2**
> **Median**: List from small to large. 1,1,1,1,**2**,2,3,3,4.   Middle score is the median: **2**
> **Mode**: Appears the most number of times: **1**

4) 18, 21, 25, 14, 18, 19, 25

> **Mean**: (18 + 21 + 25 + 14 + 18 + 19 + 25) ÷ 7 = 140 ÷ 7 = **20**
> **Median**: List from small to large. 14,18,18,**19**,21,25,25.   Middle score is the median: **19**
> **Mode**: Appears the most number of times: **Two modes: 18 & 25**

5) Samantha has taken 4 quizzes. Her scores were 20, 18, 15 and 17. Samantha must take one more test. What is the lowest score she can have to have an 17 mean average?

> $$\frac{20+18+15+17+x}{5}=17 \quad \Longrightarrow \quad \frac{70+x}{5}=17 \quad \Longrightarrow \quad \text{Multiply by 5. Subtract 70.}$$
> $$x = \mathbf{17}$$

6) There were 5 homes that sold in St. Joe County last week.
   They sold for: $76,000 $81,000 $88,500 $68,500 $81,000
    What were the mean, median and mode for these prices?

> **Mean**: (76000 + 81000 + 88500 + 68500 + 81000) ÷ 5 = 395,000 ÷ 5 = **$79,000**
> **Median**: List from small to large. 68500, 76000, **81000**, 81000, 85500.
>   Middle score is the median: **$81,000**
> **Mode**: Appears the most number of times: **$81,000**