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| **Comparing Measures of Central Tendency** | | | |
| Determines the mean and mode for a data set  14, 19, 23, 27, 28, 33  The mean is:   (14 + 19 + 23 + 27 + 28 + 33) ÷ 6 = 144 ÷ 6  = 24  There is no mode. | Determines the median and range for a data set  14, 19, 23, 27, 28, 33  The median is:   (23 + 27) ÷ 2 = 50 ÷ 2 = 25 The range is: 33 – 14 = 19 | Suggests and justifies the choice of measure to represent a data set  A person spent these amounts for  4 weekly grocery bills:  $174, $196, $205, $220  There is no mode. In dollars, the mean is:   (174 + 196 +205 + 220) ÷ 4  = 795 ÷ 4 = 198.75  In dollars, the median is:  (196 + 205) ÷ 2 = 401÷ 2  = 200.50 Since the mean and median are so close in value, either measure could represent the data. | Identifies an outlier and explains its effect on the mean, median, and mode  A student has these marks on English tests: 84, 72, 81, 72, 32  The outlier is 32, because it is much less than the other numbers.  With the outlier, the mean is:  (84 + 72 + 81 + 72 + 32) ÷ 5 = 341 ÷ 5  = 68.2 The median is 72. The mode is 72. Without the outlier, the mean is:  (84 + 72 + 81 + 72) ÷ 4 = 309 ÷ 4  = 77.25 The median is:  (72 + 81) ÷ 2 = 76.5 The mode is 72.  The outlier affects the mean and median – it reduces both these measures. The outlier has no effect  on the mode. |
| **Observations/Documentation** | | | |
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