Name: Date:

Topic: **DATA ANALYSIS**

1. Find the mean, mode and median for the following sets of data

   (a)   8, 12, 7, 5, 8, 4, 8, 11, 9, 4, 10

   (b)   56, 64, 82, 55, 76, 81, 60, 58, 80, 73, 75, 64

2. Calculate the range, interquartile range and standard deviation for each of the following sets of scores.

   (a)   18, 20, 14, 15, 20, 19, 11, 12, 16, 8

   (b)   110, 125, 115, 110, 130, 145, 165, 180, 170

3.   Calculate the mean, mode, range and standard deviation for the following set of results.

Score	Frequency		
5	3		
6	8		
7	6		
8	8		
9	10		
10	5		
Total			

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1. (a)   8, 12, 7, 5, 8, 4, 8, 11, 9, 4, 10
    (b)   56, 64, 82, 55, 76, 81, 60, 58, 80, 73, 75, 64

    (a)   Mean = (8+12+7+5+8+4+8+11+9+4+10) ÷ 11
           ≈ 7.82

         Mode = 8

         4, 4, 5, 7, 8, (8), 8, 9, 10, 11, 12

         Median = 8

    (b)   Mean = $\frac{824}{12}$ = $68\frac{2}{3}$

         Mode = 64

         55, 56, 58, 60, 64, (64, 73) 75, 76, 80, 81, 82

         Median = 68.5

2. (a)   18, 20, 14, 15, 20, 19, 11, 12, 16, 8
    (b)   110, 125, 115, 110, 130, 145, 165, 180, 170

    (a)   Range = 20 – 8 = 12

         8, 11, (12) 14, 15, 16, 18, (19), 20, 20

         Interquatile Range = 19 – 12 = 7

         Standard Deviation = $\sqrt{\frac{2491}{10} - 15.3^2}$ = $\sqrt{15.01}$ = 3.874

    (b)   Range = 180 – 110 = 70

         110, (110, 115), 125, 130, 145, (165, 170), 180

         Interquartile Range = 167.5 – 112.5 = 55

         Standard Deviation = $\sqrt{\frac{179500}{9} - 138.9^2}$ = $\sqrt{651.32}$ ≈ 25.6

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3. Calculate the mean, mode, range and standard deviation for the following set of results.

Score	Frequency	Fx	fx^2
5	3	15	75
6	8	48	288
7	6	42	294
8	8	64	512
9	10	90	810
10	5	50	500
Total	40	309	2479

Mean = $\frac{309}{40}$ = 7.725

Mode = 9

Range = 10 – 5 = 5

Standard Deviation = $\sqrt{\frac{2479}{40} - 7.725^2}$

                = $\sqrt{2.2994}$

                = 1.5164