Homework Practice

2. Find the mean, median, Interquartile Range (IQR), and the Mean Absolute Deviation (MAD of the numbers shown below.

30, 35, 42, 15, 20, 87, and 23

Mean = _____ Median = _____ IQR = _____ MAD = _____

Do the Work:

Mean: Add and Divide

Median: Put Numbers in Order and Find the Middle Number

IQR: Find the Median of the Lower Half of Number and the Upper Half of Number and Subtract

MAD Worksheet

x	$\overline{x}$	$x - \overline{x}$	$\lvert x - \overline{x} \rvert$

SUM: _____

$$MAD = \frac{sum}{n} =$$

Which measure of central tendency and measure of variability describe the data best?

Quiz Review

Match the correct vocabulary term with its definition.

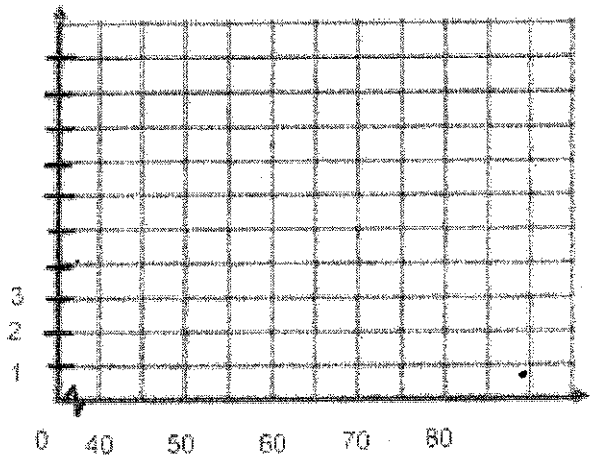
MAD	skewed	IQR
outlier	symmetry	mode
histogram	uniformity	mean

1. Upper quartile minus the lower quartile. _____
2. The graph of a frequency distribution. _____
3. The arithmetic average. _____
4. The data value that occurs most often. _____
5. The average distance each value is away from the mean. _____
6. Half the data shape is the mirror image of the other half. _____
7. An extreme value. _____
8. The data shape has a tail either right or left. _____
9. The shape of the data is rectangular, and data is equally spread across the range. _____

10. Construct a **FREQUENCY DISTRIBUTION** for the data below. Then construct a **HISTOGRAM**.

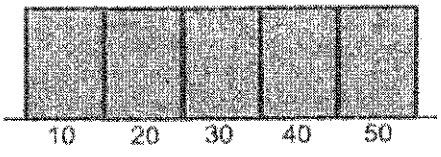
Mr. Hall measured the heights of students (inches) from a previous class.
The results: 57, 59, 66, 60, 70, 47, 61, 55, 57, 71, 74, 48, 70, 67, 62, 62, 58, 55, 62, 68

Height (in)	Frequency
40 up to 50	
50 up to 60	
60 up to 70	
70 up to 80	



Describe the shape of the distribution. (Skewed, Uniform, Non-symmetric, etc.)

11.



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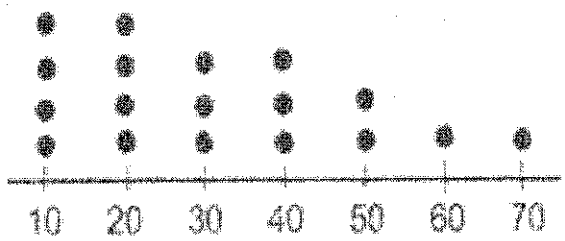


Homework Practice Key

2. Find the mean, median, Interquartile Range (IQR), and the Mean Absolute Deviation (MAD of the numbers shown below.

~~30~~, 35, ~~42~~, ~~15~~, ~~20~~, ~~87~~, and ~~23~~

Mean = 36 Median = 30 IQR = 22 MAD = _____

Do the Work:

outliers:

20 - 1.5(22) = -13

42 + 1.5(22) = 75

*1 outlier (87)

Mean: Add and Divide

Median: Put Numbers in Order and Find the Middle Number

IQR: Find the Median of the Lower Half of Number and the Upper Half of Number and Subtract

42 - 20 = 22

MAD Worksheet

	x	$\bar{x}$	$x - \bar{x}$	$\lvert x - \bar{x} \rvert$
	15	36	15-36	21
Q1 →	20		20-36	16
	23		23-36	13
Med →	30		30-36	6
	35		35-36	1
Q3 →	42		42-36	6
	87	↓	87-36	51

SUM: 114

$$MAD = \frac{sum}{n} = \frac{114}{7} = 16.3$$

Which measure of central tendency and measure of variability describe the data best?

Median and IQR (outliers exist)

Quiz Review

Match the correct vocabulary term with its definition.

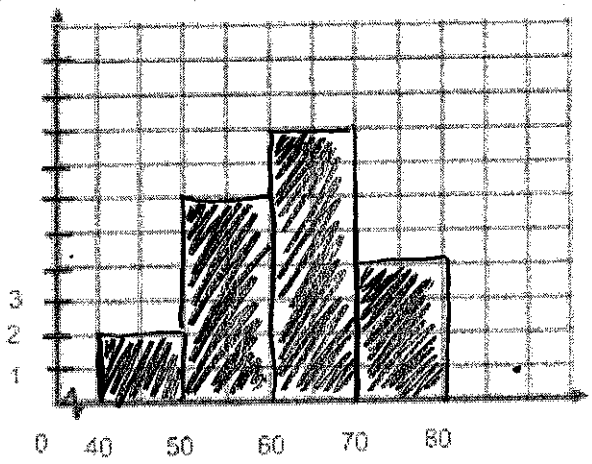
~~MAD~~	~~skewed~~	~~IQR~~
~~outlier~~	~~symmetry~~	~~mode~~
~~histogram~~	~~uniformity~~	~~mean~~

1. Upper quartile minus the lower quartile. IQR
2. The graph of a frequency distribution. histogram
3. The arithmetic average. Mean
4. The data value that occurs most often. Mode
5. The average distance each value is away from the mean. MAD
6. Half the data shape is the mirror image of the other half. symmetry
7. An extreme value. outlier
8. The data shape has a tail either right or left. skewed
9. The shape of the data is rectangular, and data is equally spread across the range. uniform

10. Construct a **FREQUENCY DISTRIBUTION** for the data below. Then construct a **HISTOGRAM**.

Mr. Hall measured the heights of students (inches) from a previous class.
The results: ~~57, 59, 66, 60, 70, 47, 61, 55, 57, 71, 74, 48, 70, 67, 62, 62, 58, 55, 62, 68~~

Height (in)	Frequency
40 up to 50	II
50 up to 60	~~IIII~~ I
60 up to 70	~~IIII~~ III
70 up to 80	IIII



*Borderline heights fall into upper interval. (ex: 60 falls into 60-70)

Describe the shape of the distribution. (Skewed, Uniform, Non-symmetric, etc.)

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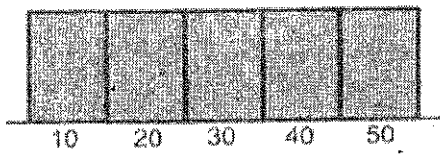

uniform

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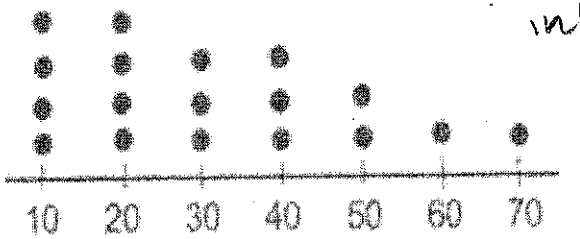

skewed right