

INTERQUARTILE RANGE**Definitions and Guidelines**

**Median:** The middle number after the numbers are put in numerical order.

**Quartile 1 ( $Q_1$ ):** The middle number on the left side after the median has been determined. \*

**Quartile 3 ( $Q_3$ ):** The middle number on the right side after the median has been determined. \*

**Five Number Summary:** The lowest number,  $Q_1$ , Median,  $Q_3$ , the highest number.

**Interquartile Range (IQR):** The  $Q_3$  minus the  $Q_1$ .

\*If there are an odd number of numbers, remove the median before determining the quartiles.

\*If there are an even number of numbers, average the middle two to find the median, but don't remove any numbers when determining the quartiles.

**Example: This group of numbers has already been placed in order:** (Answers at bottom)

23 27 32 40 43 46 50

The median \_\_\_\_\_, the  $Q_1$  \_\_\_\_\_, the  $Q_3$  \_\_\_\_\_, 5 # Summary \_\_\_\_\_, IQR \_\_\_\_\_

1) Determine the following concerning these numbers:

12 15 19 25 30 34 38

The median \_\_\_\_\_, the  $Q_1$  \_\_\_\_\_, the  $Q_3$  \_\_\_\_\_, 5 # Summary \_\_\_\_\_, IQR \_\_\_\_\_

2) Determine the following concerning these numbers:

50 52 54 57 59 62 66 70

The median \_\_\_\_\_, the  $Q_1$  \_\_\_\_\_, the  $Q_3$  \_\_\_\_\_, 5 # Summary \_\_\_\_\_, IQR \_\_\_\_\_

3) Determine the following concerning these numbers:

76 77 79 80 82 88 90 92 95

The median \_\_\_\_\_, the  $Q_1$  \_\_\_\_\_, the  $Q_3$  \_\_\_\_\_, 5 # Summary \_\_\_\_\_, IQR \_\_\_\_\_

4) Determine the following concerning these numbers: (Put them in order first)

17 25 9 15 21 29 11

The median \_\_\_\_\_, the  $Q_1$  \_\_\_\_\_, the  $Q_3$  \_\_\_\_\_, 5 # Summary \_\_\_\_\_, IQR \_\_\_\_\_

[Answer to Example: median 40,  $Q_1$  27,  $Q_3$  46, 5 # Summary 23 27 40 46 50, IQR 19 ]

**Work this problem at the end of Phase I:**

5) Determine the following concerning these numbers: (Put them in order first)

40 60 62 36 42 50 48 56

The median \_\_\_\_\_, the  $Q_1$  \_\_\_\_\_, the  $Q_3$  \_\_\_\_\_, 5 # Summary \_\_\_\_\_, IQR \_\_\_\_\_

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**Work this problem at the end of Phase II:**

6) Determine the following concerning these numbers: (Put them in order first)

73 68 72 69 71 67 70

The median \_\_\_\_\_, the  $Q_1$  \_\_\_\_\_, the  $Q_3$  \_\_\_\_\_, 5 # Summary \_\_\_\_\_, IQR \_\_\_\_\_

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**Work this problem at the end of Phase III:**

7) Determine the following concerning these numbers: (Put them in order first)

32 34 30 36 28 40 24 45

The median \_\_\_\_\_, the  $Q_1$  \_\_\_\_\_, the  $Q_3$  \_\_\_\_\_, 5 # Summary \_\_\_\_\_, IQR \_\_\_\_\_

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**Work these problems just prior to the MCA Test:**

8) Determine the following concerning these numbers: (Put them in order first)

26 37 30 40 34 21 24

The median \_\_\_\_\_, the  $Q_1$  \_\_\_\_\_, the  $Q_3$  \_\_\_\_\_, 5 # Summary \_\_\_\_\_, IQR \_\_\_\_\_

9) Determine the following concerning these numbers: (Put them in order first)

100 88 97 89 95 91 94 92

The median \_\_\_\_\_, the  $Q_1$  \_\_\_\_\_, the  $Q_3$  \_\_\_\_\_, 5 # Summary \_\_\_\_\_, IQR \_\_\_\_\_