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- 1) Find the mean of $\{87, 61, 25, 54, 55, 70, 19, 79, 13, 1, 4, 93\}$.
- a. 46.25
b. 46.75
c. 47.25
d. 48.75
e. 49.25
- 2) What is the IQR of the set of elements in $\sum_{i=1}^{12} \frac{13n}{2} - 11$?
- a. 20
b. 21
c. 33
d. 39
e. 52
- 3) The mean of $\{1, 86, 11, 8, x, 52, 82, 34, 92, 4, 36, 7\}$ is 36. Find x .
- a. 54
b. 45
c. 31
d. 22
e. 19
- 4) Find the median of $\{80, 23, 26, 84, 16, 37, 44, 50, 71, 31, 36, 85\}$.
- a. 37.5
b. 39
c. 40.5
d. 42.5
e. 47
- 5) Find the interquartile range of $\{13, 2, 49, 29, 33, 55, 5, 9\}$.
- a. 34
b. 36
c. 39
d. 42
e. 48

- 6) What is the range of $\{71, 54, 8, 12, 74, 47, 21, 48, 60, 58, 30, 78\}$?
- a. 71
b. 78
c. 76
d. 70
e. 72
- 7) The mean of $\{6, 29, 3, 14, q, q + 8, q^2, q + 10\}$ is 22.25. Find a possible value of q .
- a. 7
b. 8
c. 9
d. 10
e. 11
- 8) What is the median of the set of elements in $\sum_{i=1}^{12} 18 - \frac{2}{3}n$?
- a. 15
b. $14\frac{2}{3}$
c. $14\frac{1}{3}$
d. 14
e. $13\frac{2}{3}$
- 9) What is the range of $\{29, 52, 65, 21, 83, 24, 36, 50, 79, 60, 66, 73\}$?
- a. 61
b. 62
c. 72
d. 73
e. 79
- 10) The variable x with n observations has $\sum x^2 = 8900$, $\sum x = 220$, $\sigma = 18$. Find x .
- a. 9
b. 11
c. 12
d. 16
e. 19
- 11) What is the mean of the set of elements in $\sum_{i=2}^9 12 - 2n$?
- a. -2
b. -1
c. 1
d. 2
e. 3

- 12) Find the standard deviation of $\{3, 9, 15, 24, 29\}$.
- a. 9.51
 - b. 10.1
 - c. 11.2
 - d. 13.5
 - e. 14.3
- 13) What is the median of $\{10, 9, 97, 13, 25, 52, 38, 51, 5, 100, 27, 33\}$?
- a. 29.5
 - b. 31.5
 - c. 26
 - d. 30
 - e. 29
- 14) Find the interquartile range of $\{29, 11, 54, 64, 31, 83, 52, 53, 27, 44, 66, 87\}$.
- a. 29
 - b. 31
 - c. 30
 - d. 54
 - e. 35
- 15) What is the missing value, given the set has a mean of 37?
- $$\{75, 25, 30, 35, 2, 6, 11, 80, 50, x\}$$
- a. 39
 - b. 55
 - c. 37
 - d. 56
 - e. 68
- 16) What is Q1 of $\{8, 78, 92, 38, 57, 72, 16, 28, 90, 14\}$?
- a. 8
 - b. 12
 - c. 14
 - d. 16
 - e. 15
- 17) What is the mode of $\{40, 8, 81, 55, 63, 81, 8, 87, 40, 75, 80, 80, 81, 75\}$?
- a. 81
 - b. 83
 - c. 75
 - d. 80
 - e. 87

- 18) What is the new Q1 after $\{16, 20\}$ is added to the set $\{50, 30, 79, 94, 7, 31, 86, 63, 91, 77\}$?
- a. 22
 - b. 23
 - c. 25
 - d. 28
 - e. 30
- 19) What is the sum of outliers in the set $\{88, 5, 82, 85, 54, 77, 95, 58, 72, 90, 91, 6\}$?
- a. 6
 - b. 91
 - c. 0
 - d. 182
 - e. 11
- 20) Find x if the set $\{x, 50, 7, 31, 83, 66, 12, 29\}$ has a mean of 44.5.
- a. 12
 - b. 15
 - c. 39
 - d. 78
 - e. 81
- 21) What is the interquartile range of $\{40, 15, 67, 73, 84, 44, 55, 80, 18, 29\}$?
- a. 42
 - b. 44
 - c. 47
 - d. 50
 - e. 54
- 22) The integer set $\{5, a, b, 8, 10\}$ has $\text{Q1} = 6$, median = 8. If $5 \leq a < b \leq 8$, what is the set's mean?
- a. 7.4
 - b. 7.7
 - c. 8.1
 - d. 8.5
 - e. 8.7
- 23) A set has a mean of 71, median of 63, no mode, and a range of 164. What is its approximate standard deviation?
- a. 41
 - b. 42
 - c. 44
 - d. 45
 - e. 47

Consider the set $\{73, 39, 43, 37, 67, 68, 46, 47, 19, 55, 88, 49\}$. Find:

- 24) ... Q3.
- a. 64.5
 - b. 65.5
 - c. 66.5
 - d. 67.5
 - e. 68.5
- 25) ... the difference between range and IQR.
- a. 42.3
 - b. 42.5
 - c. 42.6
 - d. 42.9
 - e. 43.1

Consider the set $\{7, 10, 11, 13, 29\}$. What is its:

- 26) ... variance?
- a. 64
 - b. 62
 - c. 60
 - d. 58
 - e. 56
- 27) ... element with the smallest absolute z-score?
- a. 7
 - b. 10
 - c. 11
 - d. 13
 - e. 29

Consider the data set $\{k - 3, k + 1, k + 2, k + 4\}$, where k is an unknown number. What is...

- 28) ... the mean of this data set in terms of k ? 29) ... its variance?
- a. $\frac{k+2}{2}$
 - b. $\frac{2k-1}{2}$
 - c. $k + 0.5$
 - d. $k - 1$
 - e. $k + 1$
- 30) ... k , given that the value 4 has a z-score of 1?
- a. 0.41
 - b. 0.45
 - c. 0.46
 - d. 0.48
 - e. 0.51

Consider the set $\{-45, 71, 72, 40, 92, 27, 67, 26, 25, 79, 70, 18\}$. If $\{-2, 188, 189\}$ is added, what

31) ... is the new Q1?

- a. 27
- b. 26.5
- c. 26
- d. 25
- e. 18

32) ... element is an outlier?

- a. 188
- b. 2
- c. -45
- d. 18
- e. 92

Consider the set $\{27, 43, 29, 34, 53, 37, 19, 58\}$. What is:

33) ... the standard deviation?

- a. 12.2
- b. 12.3
- c. 12.4
- d. 12.5
- e. 12.6

34) ... the value that corresponds to a z-score of 2?

- a. 62.9
- b. 62.7
- c. 62.5
- d. 62.3
- e. 62.1

35) ... the value that corresponds to a z-score of -1?

- a. 23.9
- b. 24.2
- c. 24.5
- d. 24.8
- e. 25.1