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Statistics MCQs – Estimation Part 4

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61. In developing a 95 % confidence interval estimate for a population mean, the interval estimate was (63.54; 68.12) . What was the sample mean?

- a. 66.15
- b. 65.83
- c. 65.35
- d. 67.01
- e. 66.87

Answer: B

62. In developing a 95 % confidence interval estimate for a population mean, the interval estimate was (62.15; 68.55) . What was the sample mean?

- a. 66.15
- b. 65.83
- c. 65.35
- d. 67.01
- e. 66.87

Answer: C

63. In developing a 95 % confidence interval estimate for a population mean, the interval estimate was (64.78; 69.23) . What was the sample mean?

- a. 66.15
- b. 65.83
- c. 65.35
- d. 67.01

e. 66.87

Answer: D

64. In developing a 95 % confidence interval estimate for a population mean, the interval estimate was (65.33; 68.41) . What was the sample mean?

a. 66.15

b. 65.83

c. 65.35

d. 67.01

e. 66.87

Answer: E

65. In developing a 95 % confidence interval estimate for a population mean, the interval estimate was (62.84; 69.46) . Given a sample size of 100, what was the population standard deviation?

a. 16.89

b. 11.68

c. 16.33

d. 11.35

e. 7.86

Answer: A

66. In developing a 95 % confidence interval estimate for a population mean, the interval estimate was (63.54; 68.12) . Given a sample size of 100, what was the population standard deviation?

a. 16.89

b. 11.68

c. 16.33

d. 11.35

e. 7.86

Answer: B

67. In developing a 95 % confidence interval estimate for a population mean, the interval estimate was (62.15; 68.55) . Given a sample size of 100, what was the population standard deviation?

- a. 16.89
- b. 11.68
- c. 16.33
- d. 11.35
- e. 7.86

Answer: C

68. In developing a 95 % confidence interval estimate for a population mean, the interval estimate was (64.78; 69.23) . Given a sample size of 100, what was the population standard deviation?

- a. 16.89
- b. 11.68
- c. 16.33
- d. 11.35
- e. 7.86

Answer: D

69. In developing a 95 % confidence interval estimate for a population mean, the interval estimate was (65.33; 68.41) . Given a sample size of 100, what was the population standard deviation?

- a. 16.89
- b. 11.68
- c. 16.33
- d. 11.35
- e. 7.86

Answer: E

70. In developing an interval estimate for a population mean, the population standard deviation was assumed to be 10. The interval estimate was 50.92 ± 2.14 . Had the population standard deviation been 20, what would the interval estimate be?

- a. 60.92 ± 2.14
- b. 50.92 ± 12.14
- c. 101.84 ± 4.28
- d. 101.94 ± 12.14

e. 50.92 ± 4.28

Answer: E

71. In developing an interval estimate for a population mean, the population standard deviation was assumed to be 5. The interval estimate was 50.92 ± 2.80 . Had the population standard deviation been 10, what would the interval estimate be?

a. 60.92 ± 2.14

b. 50.92 ± 5.60

c. 101.84 ± 4.28

d. 101.94 ± 12.14

e. 50.92 ± 4.28

Answer: B

72. In developing a confidence interval for a population mean, a sample of 50 observations was used. The confidence interval was 19.76 ± 1.32 . Had the sample size been 200 instead of 50, what would the interval estimate have been?

a. 19.76 ± 0.66

b. 19.76 ± 0.33

c. 19.76 ± 2.64

d. 19.76 ± 5.28

e. 39.52 ± 1.32

Answer: A

73. A student conducted a study and reported that the 95 % confidence interval for the population mean was (46; 54) . He was sure that the population standard deviation was 16. What was the sample size (rounded up to the nearest whole number) used to calculate this confidence interval?

a. 62

b. 97

c. 110

d. 30

e. 40

Answer: A

74. A student conducted a study and reported that the 95 % confidence interval for the population mean was (46; 54) . He was sure that the population standard deviation was 20. What was the sample size (rounded up to the nearest whole number) used to calculate this confidence interval?

- a. 62
- b. 97
- c. 110
- d. 30
- e. 40

Answer: B

75. A student conducted a study and reported that the 95 % confidence interval for the population mean was (46; 52) . He was sure that the population standard deviation was 16. What was the sample size (rounded up to the nearest whole number) used to calculate this confidence interval?

- a. 62
- b. 97
- c. 110
- d. 30
- e. 40

Answer: C

76. A student conducted a study and reported that the 95 % confidence interval for the population mean was (46; 54) . He was sure that the population standard deviation was 11. What was the sample size (rounded up to the nearest whole number) used to calculate this confidence interval?

- a. 62
- b. 97
- c. 110
- d. 30
- e. 40

Answer: D

77. A student conducted a study and reported that the 95 % confidence interval for the population mean was (46; 56) . He was sure that the population standard deviation was

16. What was the sample size (rounded up to the nearest whole number) used to calculate this confidence interval?

- a. 62
- b. 97
- c. 110
- d. 30
- e. 40

Answer: E

78. Sand is packed into bags which are then weighed on scales. It is known that if full bags of sand are intended to weigh μ kg, then the weight recorded by the scales will be normally distributed with a mean μ kg and a standard deviation of 0.36kg. A particular bag of sand was weighed four times and the weight recorded each time was different. The sample mean weight was recorded as 34.7kg. What is the total width of a 95 % confidence interval for the true weight of the full bag of sand?

- a. 0.71kg
- b. 0.36kg
- c. 0.98kg
- d. 0.45kg
- e. 0.90kg

Answer: A

79. Sand is packed into bags which are then weighed on scales. It is known that if full bags of sand are intended to weigh μ kg, then the weight recorded by the scales will be normally distributed with a mean μ kg and a standard deviation of 0.36kg. A particular bag of sand was weighed four times and the weight recorded each time was different. The sample mean weight was recorded as 36.2kg. What is the total width of a 95 % confidence interval for the true weight of the full bag of sand?

- a. 0.71kg
- b. 0.36kg
- c. 0.98kg
- d. 0.45kg
- e. 0.90kg

Answer: A

80. Sand is packed into bags which are then weighed on scales. It is known that if full bags of sand are intended to weigh μ kg, then the weight recorded by the scales will be normally distributed with a mean μ kg and a standard deviation of 0.5kg. A particular bag of sand was weighed four times and the weight recorded each time was different. The sample mean weight was recorded as 34.7kg. What is the total width of a 95 % confidence interval for the true weight of the full bag of sand?

- a. 0.71kg
- b. 0.36kg
- c. 0.98kg
- d. 0.45kg
- e. 0.90kg

Answer: C

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