

Name

Solution Key

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Use the given degree of confidence and sample data to construct a confidence interval for the population mean μ . Assume that the population has a normal distribution.

1) $n = 12$, $\bar{x} = 19.1$, $s = 5.0$, 99 percent

(A) $14.62 < \mu < 23.58$

B) $14.53 < \mu < 23.67$

C) $14.63 < \mu < 23.57$

D) $15.18 < \mu < 23.02$

1) A

TI-83: OPTION 8

$$\mu = \bar{x} \pm t_{\alpha/2} \frac{s}{\sqrt{n}}$$

$$\mu \in (14.617, 23.583)$$

Find the margin of error.

2) 95% confidence interval; $n = 91$; $\bar{x} = 72$, $s = 11.4$

(A) 2.37

B) 2.03

C) 2.13

D) 4.57

2) A

TI-83 OPTION 8

$$\mu \in (69.626, 74.374)$$

$$E = \text{Margin of error} = \frac{(74.374 - 69.626)}{2}$$

$$= 2.374$$