

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Inference from sample statistics and margin of error	Easy

ID: 7007be56



Scott selected **20** employees at random from all **400** employees at a company. He found that **16** of the employees in this sample are enrolled in exactly three professional development courses this year. Based on Scott’s findings, which of the following is the best estimate of the number of employees at the company who are enrolled in exactly three professional development courses this year?

- A. **4**
- B. **320**
- C. **380**
- D. **384**

Question ID 88689c52

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Inference from sample statistics and margin of error	Easy

ID: 88689c52

A company designs and makes handbags. To estimate the mean weight of the handbags made by the company on a particular day, a sample of the handbags made by the company on that day was selected at random. Based on the sample, it is estimated that the mean weight of all handbags made by the company on that day is 27.8 ounces (oz), with an associated margin of error of 0.02 oz. Based on this estimate and associated margin of error, which of the following is the most plausible conclusion?

- ~~A~~ ^{actual/true} The mean weight of all handbags made by the company on that day is between **27.78 oz** and **27.82 oz**.
- B. The ~~actual~~ weights of all handbags made by the company on that day are between **27.78 oz** and **27.82 oz**.
- C. The ~~actual~~ weights of all handbags from the sample are between **27.78 oz** and **27.82 oz**.
- D. The mean weight of all handbags made by the company on that day is ~~27.8~~ oz.

$$27.8 - 0.02 < \text{X} < 27.8 + 0.02$$
$$27.78 < \text{X} < 27.82$$

Question ID 37ff191d

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Inference from sample statistics and margin of error	Easy

ID: 37ff191d

An analyst collected data on the price of a carton of grape tomatoes at **30** locations selected at random in Utah. The mean price of a carton of grape tomatoes in Utah was estimated to be \$4.23, with an associated margin of error of \$0.08. Which of the following is a plausible statement about the mean price of a carton of grape tomatoes for all locations that sell this product in Utah?

- ~~A.~~ It is between ~~\$4.15~~ and ~~\$4.31~~. $4.23 - 0.08 < x < 4.23 + 0.08$
- B. It is either less ~~than~~ ~~\$4.15~~ or greater ~~than~~ ~~\$4.31~~. $4.15 < x < 4.31$
- ~~C.~~ It is less ~~than~~ ~~\$4.15~~.
- ~~D.~~ It is greater ~~than~~ ~~\$4.31~~.

Question ID 9cbbe96d

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Inference from sample statistics and margin of error	Easy

ID: 9cbbe96d

There are 55 students in Spanish club. A sample of the Spanish club students was selected at random and asked whether they intend to enroll in a new study program. Of those surveyed, 20% responded that they intend to enroll in the study program. Based on this survey, which of the following is the best estimate of the total number of Spanish club students who intend to enroll in the study program?

~~X~~ 11

B. 20

C. 44

D. 55

$55(0.2) = 11 //$