Name _____ Date _____ Class _____

Unit 1

Inferences and Conclusions from Data

Test Form A

Select the best answer.

1. What is the mean of the data set {0, 2, 4, 8, 16, 36} ?

   A 8.0 C 11.0

   B 12.0 D 13.2

2. This data represent the number of books Sarah read each month:

   {1, 1, 3, 3, 4}.

   What is the approximate standard deviation of the data set?

   F 1.2 G 2.4

3. The probability distribution of the number of piglets per litter on a farm is given below.

Piglet Births per Litter			
***n* piglets**	4	5	6
Probability of *n* piglets	0.2	0.4	0.4

   What is the expected number of piglets per litter on this farm?

   A 4.8 C 5.2

   B 5.0 D 5.8

4. The school principal wants to know if students like the school mascot. She asks 120 students throughout the day. Which of these is the population?

   F 120 students

   G All the students that like the mascot

   H All the students that do not like the mascot

   J All the students in the school.

5. A store owner wants to know if he sells more water or sports drinks. He records the number of sales for both products. What is the data-gathering technique used?

   A experiment

   B randomized survey

   C observational study

   D voluntary survey

6. A math student wants to know if listening to Mozart while sleeping will improve his test scores. Which of these is the null hypothesis?

   F There will be no change in the test scores.

   G The test scores will improve.

   H The test scores will go down.

   J The student will pass all his tests.

7. A teacher wants to know what students think about the new cafeteria. The teacher asks every tenth student to take the survey. What type of sample is this?

   A stratified C self-selected

   B systematic D cluster

8. What is the mean of the data set {3, 3, 3, 3, 12, 12}?

   _____

9. A bird watcher keeps track of how many birds she sees each day: {2, 2, 2, 4, 4, 2}. What is the standard deviation of the data set?

_____

10. The probability distribution for the number of pages that Rocco can read in an hour is given below.

Reading Speed			
n Pages	8	10	12
Probability of *n* pages	0.2	0.7	0.1

What is the expected number of pages that Rocco will read in any hour?

_____

11. The gym teacher wants to know how many students play a sport. She asks 20 students throughout the day. What is the population?

_____

12. A store owner wants to know if his shoppers like bar soap or shower gel. He sells only bar soap for one month. Then he sells only show gel and records the results. What is the data-gathering technique used?

_____

13. An runner wants to know if wearing new shoes will improve his overall running speed. What is the null hypothesis?

_____

14. A city mayor wants to know what citizens think about the city park. The mayor randomly chooses streets and asks every person that lives there. What type of sample is this?

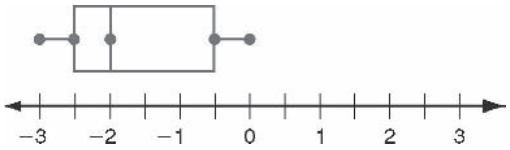
_____

Unit 1

Inferences and Conclusions from Data

Answers

Module 1 Quiz

1. B
2. H
3. D
4. F
5. C
6. G
7. B
8. G
9. 3
10. 

11. The mean will increase. The standard deviation will increase.
12. 480
13. the 250 that watch the old commercial
14. the 300 that watch the new show

Module 2 Quiz

1. B
2. F
3. A
4. H
5. C
6. G
7. D
8. G
9. D
10. G
11. B
12. G
13. 4
14. stratified sample
15. 32% to 36%

Unit 1 Test Form A

1. C
2. F
3. C
4. J
5. C
6. F
7. B
8. 6
9. $\sqrt{\frac{8}{9}}$ or ≈ 0.943
10. 9.8
11. everyone in the school
12. experiment
13. There will be no effect on the runner's speed.
14. cluster sample

Unit 1 Test Form B

1. B
2. F
3. B
4. F
5. A
6. J
7. A
8. 2.5
9. $\sqrt{3}$ or ≈ 1.73
10. 6.7
11. the 80 students the gym teacher asks
12. observational study
13. There will be no effect on the dog's health.
14. stratified sample

Unit 1 Test Form C

1. C
2. H
3. B