S.ID.A.2: Dispersion 1

1 What is the best approximation of the standard deviation of the measures $-4, -3, 0, 8, 9$?

1) 1
2) 2
3) 5
4) 10

2 The following table shows the heights, in inches, of the players on the opening-night roster of the 2015-2016 New York Knicks.

84	80	87	75	77	79	80	74	76	80	80	82	82

The population standard deviation of these data is approximately

1) 3.5
2) 13
3) 79.7
4) 80

3 The term "snowstorms of note" applies to all snowfalls over 6 inches. The snowfall amounts for snowstorms of note in Utica, New York, over a four-year period are as follows:

7.1, 9.2, 8.0, 6.1, 14.4, 8.5, 6.1, 6.8, 7.7,
21.5, 6.7, 9.0, 8.4, 7.0, 11.5, 14.1, 9.5, 8.6

What are the mean and population standard deviation for these data, to the nearest hundredth?

1) mean = 9.46; standard deviation = 3.74
2) mean = 9.46; standard deviation = 3.85
3) mean = 9.45; standard deviation = 3.74
4) mean = 9.45; standard deviation = 3.85

4 The table below shows the highest temperatures recorded in August for several years in one town.

Year	**Temperature** (°F)
1990	86
1991	78
1992	84
1993	95
1994	81
1995	77
1996	88
1997	93

The interquartile range of these data is

1) 7
2) 10
3) 11
4) 18

5 The ages of the last 16 United States presidents on their first inauguration day are shown in the table below.

51	54	51	60
62	43	55	56
61	52	69	64
46	54	47	70

Determine the interquartile range for this set of data.

6 Find the standard deviation for the following set of data:

$\{7, 10, 14, 16, 18\}$

7 Find the standard deviation, to the *nearest hundredth*, for the following measurements:

24,28,29,30,30,31,32,32,32,33,35,36

8 The scores on a mathematics test are:

42, 51, 58, 64, 70, 76, 76, 82,
84, 88, 88, 90, 94, 94, 94, 97

For this set of data, find the standard deviation to the *nearest tenth*.

9 During a 10-game season, a high school football team scored the following number of points:

14, 17, 21, 10, 35, 27, 13, 7, 45, 21

Find the standard deviation of these scores to the *nearest thousandth*.

10 For these measurements, find the standard deviation, to the *nearest hundredth*:

85, 88, 79, 79, 80, 92, 94, 78, 80, 85

11 During a recent time period, the following Apgar scores were recorded at St. Elizabeth's Hospital:

9, 8, 10, 9, 8, 10, 9, 10, 8, 10

Find the population standard deviation of the scores, to the *nearest hundredth.*

12 The ages of ten teachers at George Washington elementary school are:

33, 23, 36, 29, 36, 36, 33, 29, 36, 29

Determine the standard deviation of these ages to the *nearest tenth*.

13 Find the standard deviation, to the *nearest hundredth*, for the following test scores:

100, 99, 99, 97, 96, 96, 95, 94, 93, 91

14 On a certain civil service examination, the grades of five people were:

71, 73, 74, 86, 96

Compute the arithmetic mean of their grades and the standard deviation to the *nearest tenth*.

15 The winning times of the women's 400-meter freestyle swimming at the Olympics are listed below. Times have been rounded to the *nearest hundredth of a minute*.

Year	Time
1960	4.66
1964	4.73
1968	4.51
1972	4.32
1976	4.17
1980	4.15
1984	4.12
1988	4.07

Find the standard deviation of these times to the *nearest hundredth of a minute*.

16 The table below shows the age at inauguration of ten presidents of the United States.

President	**Age at Inauguration**
Harry Truman	60
Dwight D. Eisenhower	62
John F. Kennedy	43
Lyndon B. Johnson	55
Richard M. Nixon	56
Gerald R. Ford	61
Jimmy Carter	52
Ronald Reagan	69
George Bush	64
Bill Clinton	46

Find, to the *nearest tenth*, the standard deviation of the age at inauguration of these ten presidents.

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Answer Section

1 ANS: 3 REF: 019935siii
2 ANS: 1 REF: 061922ai
3 ANS: 1 REF: 010707b
4 ANS: 3
77 78 81 84 86 88 93 95
79.5 90.5
90.5-79.5=11

REF: 012520ai
5 ANS:
61.5 – 51 = 10.5

REF: 082228ai
6 ANS:
4

REF: 088441siii
7 ANS:
3.06

REF: 069739siii
8 ANS:
16.2

REF: 060038siii
9 ANS:
11.198

REF: 089742siii
10 ANS:
5.48

REF: 069839siii
11 ANS:
0.83

REF: 061025b
12 ANS:
4.2

REF: 068040siii
13 ANS:
2.72

REF: 089642siii

14 ANS:
80, 9.6

REF: 068441siii

15 ANS:
0.24

REF: 019437siii

16 ANS:
7.7

REF: 080142siii