Question	1	2	3	4	5	6

Description

Section 4.3 - Measures of Dispersion

Instructions

Please work all homework questions and clearly label / place your answers in the boxes (or parenthesis) provided. If you have questions, please feel free to email me at Joshua.Patterson@tamuc.edu

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1. Question Details   JModd7 4.3.001. [1639430]

Perform each task, given the following sample data. (Round your answers to one decimal place.)

5 9 7 5 12 4

(a) Use the Sample Variance Definition to find the variance and standard deviation of the data.

variance [   ]
standard deviation [   ]

(b) Use the Alternative Formula for Sample Variance to find the variance and standard deviation of the data.

variance [   ]
standard deviation [   ]

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2. Question Details   JModd7 4.3.004.CMI. [1639281]

Find the mean and sample standard deviation of each set of data. (Round the standard deviation to two decimal places.)

(a)   2 4 6 8 10 12
mean [   ]
standard deviation [   ]

(b)   102 104 106 108 110 112
mean [   ]
standard deviation [   ]

(c) How are the data in (b) related to the data in (a)?

   ⊙ The data in (a) are 100 more than the data in (b).

   ⊙ The data in (b) are 100 more than the data in (a).

   ⊙ The data in (b) are 100 times the data in (a).

   ⊙ The data in (b) are the same as the data in (a).

   ⊙ The data are not related.

(d) How do your answers for (a) and (b) compare?

○ The means are the same. The standard deviation of the data in (b) is 100 more than the standard deviation of the data in (a).

○ The answers are not related.

○ The mean of the data in (b) is 100 more than the mean of the data in (a). The standard deviations are the same.

○ Both answers for (a) are the same as the answers for (b).

○ The mean of the data in (a) is 100 more than the mean of the data in (b). The standard deviations are the same.

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3. Question Details   JModd7 4.3.006.CMI. [1639453]

Find the mean and sample standard deviation of each set of data. (Round the standard deviation to one decimal place.)

(a)   80 80 80 80 80

mean   [   ]

standard deviation   [   ]

(b)   76 80 80 80 84

mean   [   ]

standard deviation   [   ]

(c)   37 80 80 80 123

mean   [   ]

standard deviation   [   ]

(d) How do your answers for (a), (b), and (c) compare? Select all that apply.

☐ The mean is the same every time because the sum of the data points is always 400.

☐ The data in (c) is more spread out than in (b).

☐ The data in (b) is more spread out than in (a).

☐ The data in (b) is more spread out than in (c).

☐ The data in (a) is more spread out than in (b).

☐ The standard deviation is the same every time because the sum of the data points is always 400.

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4. Question Details   JModd7 4.3.007. [1639317]

Joey and Dee Dee bowled five games at the Rock 'n' Bowl Lanes. Their scores are given in the following table.

Joey	145	171	221	160	143
Dee Dee	180	164	186	140	165

(a) Find the mean score of each bowler.

Joey   [   ]

Dee Dee   [   ]

Who has the highest mean?

○ Joey

○ Dee Dee

(b) Find the standard deviation of each bowler's scores. (Round your answers to one decimal place.)

Joey [   ]

Dee Dee [   ]

(c) Who is the more consistent bowler? Why?

- ○ Dee Dee is more consistent because her scores have a lower standard deviation.
- ○ Joey is more consistent because his scores have a higher standard deviation.
- ○ Dee Dee is more consistent because her scores have a higher mean.
- ○ Joey is more consistent because his scores have a higher mean.
- ○ Joey is more consistent because his scores have a lower standard deviation.

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5. Question Details JModd7 4.3.012. [1639561]

A basketball player's average number of points per game (PPG) for each of his seasons is given in the table below. Find the sample standard deviation of the average points per game made per season by the basketball player. (Round your answer to one decimal place.)

[   ] PPG

Season	PPG		Season	PPG
1984-85	31.4		1992-93	23.9
1985-86	22.9		1994-95	23.8
1986-87	29.9		1995-96	25.3
1987-88	28.3		1996-97	36.3
1988-89	31.7		1997-98	28.6
1989-90	32.7		2001-02	24.2
1990-91	28.0		2002-03	27.8
1991-92	22.4			

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6. Question Details JModd7 4.3.020.CMI. [1639589]

To study the efficiency of its new price-scanning equipment, a local supermarket monitored the amount of time its customers had to wait in line. The frequency distribution in the following table summarizes the findings. Find the standard deviation of the amount of time spent in line. (Round your answer to three decimal places.)

[   ] min

x = Time (minutes)	Number of Customers
$0 \leq x < 1$	77
$1 \leq x < 2$	59
$2 \leq x < 3$	67
$3 \leq x < 4$	42
$4 \leq x < 5$	39

Assignment Details