

4-2 Range + Standard Deviation

a)

Data	minus mean	squared	
49	-79.4 = -30.4	924.16	
56	-79.4 = -23.4	547.56	
72	-79.4 = -7.4	54.76	
75	:	-4.4	19.36
78	:	-1.4	1.96
87	:	7.6	57.76
89	:	9.6	92.16
90	:	10.6	112.36
98	:	18.6	345.96
<u>100</u>	:	20.6	<u>424.36</u>
79.4		2580.4	

$794 \div 10 = 79.4$

mode: none
 median: $\frac{78+87}{2} = \underline{82.5}$
 Range: $100 - 49 = \underline{51}$
 mean 79.4

$$2580.4 \div 9 = 286.71$$

$$\sqrt{286.71} = \underline{16.93} \text{ standard deviation}$$

b)

500	-635	-135	18225
800	-635	165	27225
300	-635	-335	112225
700	:	65	4225
250	:	-385	148225
900	:	265	70225
1100	:	465	216225
500	:	-135	18225
600	:	-35	1225
<u>700</u>	↑	65	<u>4225</u>

$6350 \div 10 = 635$

mode: 500
 median: 650

$$\text{Range: } 1100 - 250 = 850$$

$$\text{mean: } 635$$

$$620250 \div 9 = 68916.67 \quad \sqrt{68916.67} = 262.52 \text{ standard deviation}$$

c)

-0.3	-0.3467	0.1202
-0.1	-0.1467	0.0215
0.04	-0.0067	0.00004
0.09	0.0433	0.00188
0.25	0.2033	0.0413
<u>0.3</u>	0.2533	<u>0.0642</u>

$0.28 \div 6 = 0.0467$

mode: none
 median: 0.065
 mean: 0.0467
 Range: $0.3 - (-0.3) = 0.6$

$$0.249 \div 5 = 0.0498 \quad \sqrt{0.0498} = 0.223 \text{ standard deviation}$$