

Worksheet #4: Nasser Al Mufarji

Given the scores from Worksheet #2:

0,4,12,16,16,17,19,20,21,29,30,33,33,36,36,36,38,39,42,45,45,49

x		(Minus 28)		squared
0		-28		784
4		-24		576
12		-16		256
16		-12		144
16		-12		144
17		-11		121
19		-9		81
20		-8		64
21		-7		49
29		1		1
30		2		4
33		5		25
33		5		25
36		8		64
36		8		64
36		8		64
38		10		100
39		11		121
42		14		196
45		17		289
45		17		289
49		21		441
616/22	28	0		3902

Variance

$$3902/22$$

$$= \quad \quad \quad \mathbf{177.36}$$

Mean

$$616/22$$

$$= \quad \quad \quad \mathbf{28}$$

standard deviation

$$\text{square root of } 177.36 = \quad \mathbf{13.32}$$

Interpretation of standard deviation in terms of distribution of scores

$$28 + 13.32 = \mathbf{41.32}$$

$$28 - 13.32 = \mathbf{14.68}$$

The standard deviation is the square root of the variance. We get about 2/3rd of the score.