

STANDARD DEVIATION USINGTHE TI-83 OR TI-84

EX: 2, 4, 6, 8, 10

$$S = \sqrt{\frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n-1}} = \sqrt{\frac{220 - \frac{30^2}{5}}{4}}$$

X	X ²
2	4
4	16
6	36
8	64
10	100
<hr/>	<hr/>
30	220
$\sum X$	$\sum X^2$

$$= \sqrt{\frac{40}{4}} =$$

$$= \sqrt{10} \approx 3.16$$

Given a Frequency Distribution

X	f	f · X	f · X ²
2	3	6	12
4	2	8	32
6	1	6	36
8	5	40	320
10	4	40	400
$n = 15$		100	800

$$S = \sqrt{\frac{\sum (f \cdot x^2) - \frac{[\sum (f \cdot x)]^2}{n}}{n-1}}$$

$$= \sqrt{\frac{\sum (f \cdot x^2) - n \cdot \bar{x}^2}{n-1}}$$

$$= \sqrt{\frac{800^2 - \frac{100^2}{15}}{14}} \approx 3.08$$

CORRECTION
80

Given a Grouped Distribution

	f	Midpoints x
0-9	3	4.5
10-19	2	14.5
20-29	1	24.5
30-39	5	34.5
40-49	4	44.5

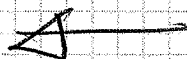
$n = 15$

↓
L2

↓

L1

$S \approx 16.7$



CORRECTION

13.44