Class A Grades(hypothetical) **Practice Problem** 10/9/2003 15:28
Dr. A. A. Walsh

STD-DEV-PRACTICE1.xls

		X		**X-Mean**			**(X-Mean)^2**
		2		-5.889			34.680
		13		5.111			26.123
		11		3.111			9.679
		8		0.111			0.012
		9		1.111			1.235
		4		-3.889			15.123
		6		-1.889			3.568
		8		0.111			0.012
		10		2.111			4.457
SUMS		71		0.000		Variation(SS)	94.889
MEAN		7.889			**A**	SamDesMS	10.543
COUNT		9			**B**	SamDesSTD	3.247
					C	Infer~MS	11.861
					D	Infer~STD	3.444

Definitional Formula, Descriptive Statistic, Sample Variance

A

$$S^2 = \frac{\sum(X-\bar{X})^2}{n}$$

Definitional Formula, Descriptive Statistic, Sample Standard Deviation

B

$$S = \sqrt{\frac{\sum(X-\bar{X})^2}{n}}$$

C

$$s^2 = \frac{\sum(X-\bar{X})^2}{n-1}$$

Definitional formula, Inferential Statistic, estimate of Population Variance from Sample Data.

D

$$s = \sqrt{\frac{\sum(X-\bar{X})^2}{n-1}}$$

Definitional formula, Inferential Statistic, estimate of Population Standard Deviation from Sample Data.